

1980

# Curriculum Development for Cooperative Education

Ann Ferris

*Eastern Illinois University*

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Author

CURRICULUM DEVELOPMENT FOR

COOPERATIVE EDUCATION  
(TITLE)

BY

Ann Ferris

**THESIS**

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR THE DEGREE OF

Specialist in Educational Administration

IN THE GRADUATE SCHOOL, EASTERN ILLINOIS UNIVERSITY  
CHARLESTON, ILLINOIS

1980

YEAR

I HEREBY RECOMMEND THIS THESIS BE ACCEPTED AS FULFILLING  
THIS PART OF THE GRADUATE DEGREE CITED ABOVE

Sept 3, 1980  
DATE

                      
ADVISER

September 2, 1980  
DATE

                      
DEPARTMENT HEAD

CURRICULUM DEVELOPMENT FOR COOPERATIVE EDUCATION  
by  
Ann Ferris

The Cooperative Education program at Lake Land College strives to provide training for students in any vocational/technical career. This is accomplished by individualizing curriculum plans using courses available on campus and securing a training station for them in local business or industrial establishments. Title VIII funding for the school year 1979 - 80 provided an opportunity to develop curriculum packages for ten of the most requested career areas. These ten areas were identified by using current students' career choices as well as by examining the records of past Cooperative Education students.

Commercial vocational material catalogs, educational curriculum guides, and the East Central Curriculum Management Center in Springfield were consulted to procure available materials in each occupation for review. Lake Land College resources available in the library and the Regional Career Guidance Center were researched and listed for the students' use. The Career Guidance Center also offered a variety of services in obtaining pertinent information on each of the ten career areas being developed such as the "career information" and "forecast" computer printouts. The DAVTE consultants in Springfield were contacted and they provided additional sources of projects and materials being developed that would be beneficial.

The task analysis and an extensive training plan were then written for each career which will guide the students' learning during the



two-year Cooperative Education experience. Courses available at Lake Land College that would support the on-the-job training were selected by interviewing counselors, division chairpersons, and teaching faculty. As a final step, materials developed for each career area were reviewed by practitioners in that particular occupation.

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## CURRICULUM DEVELOPMENT FOR COOPERATIVE EDUCATION

Cooperative Education programs come in a variety of forms, but most of them adhere to the concept that on-the-job training in the student's chosen career field is an essential element. In some programs this on-the-job training comes at the end of the student's classroom work in a capstone type arrangement such as internship. In other programs the student alternates periods of classroom study (semester, quarter, etc.) with periods of work training.

The operation of the program at Lake Land College is based on the principle that the college will try to satisfy any student's vocational aspirations. Understandably, specific curricula in all occupations in which prospective students may wish to acquire training cannot be offered. This is prohibitive not only because of the lack of qualified personnel for the teaching assignments but also because of the high cost of facilities required for training in many occupations.

Therefore, when a student requests training in a vocational/technical occupation that has no established program on campus, an individualized curriculum plan is developed for that student. Students enrolled in the Cooperative Education program at Lake Land College have received training in such occupational areas as meat cutting, modeling, X-ray technician, and welding, as well as the ten areas chosen for curriculum development this year. There are basic general education course requirements that must be met for any degree that is awarded.

Courses that are offered on campus which relate to or support the occupational training are then chosen to complete the elective segment. The student's academic needs, occupational desires, and future plans are taken into account when selecting these courses. To complete the curriculum, the student and the instructor work together to secure a training station for the student under a skilled person in the career field in which the student wishes to obtain the training. This work experience is approximately twenty hours per week and does receive Lake Land College credit hours. A one-hour seminar course compliments the work experience by assisting the student in adjusting to problems encountered in the world of work.

#### Background

The Cooperative Education program at Lake Land College was initiated in 1970. Since that time, the program has undergone several changes, the major one being the shift from granting a two-year Associate Degree to granting only a one-year certificate. A change in personnel and consequent different views about Cooperative Education at the state level was responsible for this change. The consequence of this action was a general deterioration of the program and a drop in student enrollment in succeeding years.

During 1979, a grant proposal was written to procure Title VIII funds to improve and expand the present Cooperative Education program. One of the objectives stated in the grant was to return the program to the status of a two-year Associate in Applied Science Degree. Another objective was to develop training plans and select curriculum materials for ten of the most requested occupations by students who enter the Cooperative Education program. The method used in developing

these curriculum packages was my responsibility and is the subject of this paper. The only forms that had previously been used in the Cooperative Education program are Appendix pp. 11, 12, and 13. All other materials were developed as a result of the activities listed herein.

### Selection

Selecting the ten occupations for which packages would be developed during this grant year was the first step. Records of the students currently enrolled in Cooperative Education were checked to determine the occupations in which they were receiving training. Records of past students were also examined and notations made of the frequency of the various career areas chosen by the students. The Director of the Cooperative Education program and the Dean of Career Education expressed their views on which areas they considered most important to develop this first year. The list of the ten occupations was then compiled and presented to the Cooperative Education Advisory Council for their approval. The ten occupations chosen for development were (1) auto mechanic (2) carpenter (3) electrician (4) fashion merchandising (5) floriculture (6) food services (7) interior design (8) photography (9) retail florist and (10) therapeutic recreation aid. Carpentry was the first occupation for which a curriculum package was developed and will be used as the sample (Appendix) to accompany this paper.

### Curriculum Information

Commercial vocational material catalogs were reviewed to determine what types of training aids were available for the occupation. No

decision was made at this time to purchase any of these aids, but free materials listed were procured. State curriculum catalogs were also reviewed using the same procedure. The Curriculum Publications Clearinghouse at Western Illinois University proved to be the best source for materials that would lend themselves to interpretation for writing the task analysis and the training plan.

A visit was made to the East Central Curriculum Management Center in Springfield and carpentry materials available there were selected for review. During this visit a list of reference materials available in the other nine occupations was compiled. Then as one plan was completed and materials returned, a request was sent for materials for the next occupational curriculum package that was to be developed.

#### Lake Land College Resources

The Learning Resource Center at Lake Land College proved to have a good selection of materials relating to these ten career fields. The Library of Congress Subject Headings Guide was consulted to determine all of the headings and sub-headings under which carpentry might be listed in the card catalog. The titles of materials available and call number were then compiled for student reference. (Appendix p. 40).

The Magazines for Libraries was used as the source to select magazine titles that in some way would be a good reference source for the student. The magazine card catalog was then reviewed to determine which of these were available at Lake Land College. (Appendix p. 43). Upon completion of this task, a letter was sent to some of the more popular magazines explaining our program and requesting free copies of their publication for student use.

There is a Regional Career Guidance Center located on the Lake Land College campus which also has available resources on various occupations. These were examined and listed for the students' use. Many of them proved very useful in that they listed addresses from where more information or free materials could be obtained. (Appendix p. 43).

#### Career Guidance Center Services

In addition to the material resources available at the Career Guidance Center, they also offer a variety of services to both students and educators. The first of these is a short interest inventory of twenty-four questions used basically by students who are unsure of their career plans. The computer printout the students receive from this inventory lists six general areas such as mechanical, social, etc. and the points scored in each area. The students may then request a specific informational printout on a particular career of interest to them.

The "Career Information" printout lists five areas that the students should be aware of when considering the occupation as their life's work. These are (1) activities of the job (2) requirements (3) working conditions (4) earnings and (5) outlook. The "forecast" printout describes the general and specific outlook of the occupation through the year 1985. (Appendix p. 15).

Both of these printouts were requested for the ten occupations for which curriculum packages were being developed. A three-digit code number represents the occupational title. The titles available are listed with the corresponding code number. For several of the occupations chosen, the exact title was not available. This



necessitated requesting two or three similar titles and then choosing the one that most nearly fit our own description.

The "work force survey" is a recently completed project. Information was gathered from all companies who hire ten or more people in a nine-county area. The printout includes (1) average number of full-time employees (2) average number of part-time employees (3) entry level salary (4) entry education requirements (5) minimum experience required (6) expected average annual employments (7) local supply of qualified employees and (8) approximate rate of annual turnover. All of this information is categorized according to occupational titles and may be requested using the code system provided. In addition, the employer's name, company name, and personnel manager are listed, plus such information as whether they are interested in involvement with the Cooperative Education program. At this time, the computer printout of this information is unavailable.

#### DAVTE Consultants

Contact was made with each of the state consultants in the five general classifications (1) agriculture and applied biological (2) business marketing and management (3) home economics (4) health related and (5) industrial. The consultants were very helpful in recommending the most currently developed materials and other institutions and programs that might provide up-to-date information. Dr. Howard Nelms of Eastern Illinois University was recommended for the carpentry curriculum because he had just finished a three-year project in this career field. Dr. Nelms explained his project, donated a copy of the material developed, Competency-Based Preservice Construction Trades Curriculum, to Lake Land College and recommended

others who might provide further information or suggestions.

### Task Analysis and Training Plan

After reviewing all the materials assembled on the occupation, the task analysis and training plan were written. The Catalog of Performance Objectives, Criterion-Referenced Measures and Performance Guides for Carpenter published by the Vocational-Technical Education Consortium of States was the basic reference book used for the first occupation -- carpentry.

The task analysis is a list of the general areas encountered on the job by carpenters. (Appendix p. 18). The training plan then breaks these general areas down into specific job tasks to which the student should be exposed. This exposure will occur either on the job, in a related class or through individualized study. The individualized study is included to cover those tasks that the student might not encounter because a particular carpenter may contract out some of the more specialized work. There is also space for the employer/supervisor or the classroom instructor to comment on the quality of the student's work. This training plan will be used to guide the student's learning during the two-year Cooperative Education experience. (Appendix p. 20).

### Course Selection

The required courses for any Associate in Applied Science Degree at Lake Land College are described together with any choices that are available to the student within this group. (Appendix p. 34). A member of the counseling staff was consulted to help determine what courses in the college catalog could be considered "career related" for a particular occupation. In some instances, such as courses for

carpentry, there are several in the blueprint and drafting field that would be beneficial. In other occupational areas it took a concerted effort to find courses that could be called "career related."

The division chairperson and/or faculty members who teach these courses were contacted to gather further information about the content of the courses and also to determine which job tasks listed on the training plan would be covered in the content of the courses. These contacts also proved invaluable in securing such information as what quarter the courses were generally offered or if they were courses offered on "demand" only. (Appendix p. 37). The checklist for the occupation (Appendix p. 32) and a suggested six-quarter course schedule were then compiled. (Appendix p. 33).

#### Ad hoc Advisory Approval

As the grant year began, there was discussion of forming an Advisory Council with the members representing each of the occupations chosen for curriculum development. It was later decided that this would be too diversified a group to work with and also that the Cooperative Education program already had an established Advisory Council. The formation of ten smaller committees, one for each occupation, was then considered. Again, it proved impractical because getting these people together at the same time in the same place was almost impossible.

A personal meeting with the person who had agreed to review the materials developed, at their convenience, proved to be the most successful. The Cooperative Education program was explained to them and they were asked specifically to review the training plan. As these plans had been developed from curriculum guides by someone

unfamiliar with the occupation (myself), their expert opinion concerning the job tasks listed was a necessary element. The suggestions and changes advocated by these ad hoc advisory members were made on the plan as well as an indication of what skills would be learned on the job.

#### Student Information

Copies of the forms required by the Cooperative Education program were included for the students to review; these include (1) student agreement (Appendix p. 11) (2) employer agreement (Appendix p. 12) and (3) evaluation form (Appendix p. 13). General information about the program (Appendix p. 10), the seminar requirements (Appendix p. 14), and the use of the training plan is also provided. (Appendix p. 19). In the event that there is a union organization representing the occupation, as is the case with carpentry, their cooperation was solicited to obtain a general description of their apprenticeship program and training requirements. (Appendix p. 44).

APPENDIX A  
Student Information/Forms .

## TO THE STUDENT

Welcome to Lake Land College and to the cooperative education program. The co-op program is part of Lake Land's "open door" policy which strives to accommodate any student's needs.

In the co-op curriculum you will take the general education course requirements for the Associate in Applied Science Degree. You will also take elective courses offered on campus which are related to the occupation you have chosen. Finally, you will receive on-the-job training under a skilled craftsman in your chosen occupation and attend a seminar course once a week with the co-op director.

Your on-the-job training station will be acquired through the efforts of yourself and the co-op director. If a particular training station does not work out, all effort will be made to correct the situation or to find another training station for you.

The seminar course deals with any problems you may have in adjusting to the world of work and with the human relations aspect in dealing with your employer and your fellow workers.

The co-op program is tailored to your needs as much as possible to help you acquire the skill and knowledge that you desire.

## Student Agreement - Cooperative Education Program

The Cooperative Education Program is planned to develop a student academically, economically, and socially. In doing this, there are definite things that must be done. There are responsibilities the student must realize, accept, and agree to cooperate in carrying them out to the fullest extent.

As a condition for acceptance into the Cooperative Program, I therefore agree to:

1. To be regular in attendance at school and at my training station.
2. To notify my employer as soon as I know that I will be absent from work.
3. To notify the coordinator as early in the day as possible on days that I am absent from school.
4. To carry out my training on the job in such a manner that I will reflect credit upon myself and upon the Cooperative Program, and if I drop from school, my training station is also discontinued.
5. To perform all my duties in a commendable manner, perform related study assignments with earnestness and sincerity, provide my own transportation, and the establishment of a savings account is recommended.
6. To conduct myself in a satisfactory manner, both on the job and in the class-room or my training may be discontinued and I may be removed from the program.
7. To know that if I am removed from the program due to failure either in the class instruction or work experience that I will receive a failing grade for the program and will lose all credits.
8. To attend any function the Cooperative Program class wishes to sponsor.
9. To work toward the group and individual achievement goals.
10. That while I am at work I am in a school program and the appropriate school rules apply, i.e., no smoking on the job, etc.
11. To accept counseling and guidance from the coordinator as an aid to personal improvement.
12. The provision of Public Law 92-380 pertaining to privacy rights of parents and students is understood by all parties and will be followed.
13. The job placement of students will be the responsibility of the student. However, the coordinator will make a concentrated effort on behalf of the student. As in the past most students have been placed but this is not guaranteed. If students fail to find a training station their quarter grade will be an incomplete until time is made up to earn credit hours or will be given a withdrawal grade.

Program Director \_\_\_\_\_

Student Trainee \_\_\_\_\_

LAKE LAND COLLEGE  
Co-operative Education

Date \_\_\_\_\_, 19\_\_\_\_

1. The \_\_\_\_\_ will permit \_\_\_\_\_  
(Student-Learner)  
to enter their establishment for the purpose of gaining knowledge and experience  
as \_\_\_\_\_  
(Occupation)
2. The course of training is designed to run for a one or two year period with a minimum of 20 hours per week required for the work experiences and at least one period a week required for the supervised and directed study of technical and related subjects.
3. The coordinators shall, with the assistance of the employer or someone delegated by him, prepare a schedule of processes to be learned on-the-job and an outline of related subjects to be taught in school. These items are to be made a part of this memorandum.
4. The schedule of compensation to be paid the trainee shall be fixed by the training agency and the coordinator and shall become part of this memorandum, and a record noted on the back of this sheet. Such wages shall be comparable to wages paid apprentices and other beginners in the occupation in which the student-learner is engaged. They shall conform to the Fair labor standards act of 1938, amended, if applicable.
5. The student-learner will not be permitted, in the process of gaining occupational experience, to remain in any one operation, job or phase of the occupation beyond the period of time that is necessary for him to become proficient.
6. The student, while in the process of training, will have the status of student-learner and will not displace a regular worker now employed.
7. All complaints shall be made to and adjusted by the coordinator.
8. The parent or guardian shall be responsible for the personal conduct of the student-learner while in training.
9. The employment and the student-learner shall conform to all federal, state, and local laws and regulations.
10. The employer agrees to instruct the student-learner in Safety procedures and Safe work practices in on-the-job training.
11. The employer is requested to contact the coordinator before making any major changes in the students' employment.
12. The employer will adhere to all title IV rules and regulations of employment (Sect. 86.38).

\_\_\_\_\_  
Coordinator

\_\_\_\_\_  
Student

\_\_\_\_\_  
Employer

\_\_\_\_\_  
Home

\_\_\_\_\_  
School

Health & Accident Insurance

( )

( )



CO-OPERATIVE EDUCATION  
EMPLOYER EVALUATION OF STUDENT TRAINING

14

To the employer or supervisor of \_\_\_\_\_

In what capacity are you related to the employee named above?

Employer	Supervisor				
	<u>Poor</u>	<u>Ave</u>	<u>Good</u>	<u>Excellent</u>	<u>Does Not Apply</u>
Job know-how, application of technical knowledge or skill	1	2	3	4	5
Use of tools and/or equipment	1	2	3	4	5
Selection and care of space, material and supplies	1	2	3	4	5
Quality of work, ability to meet quality demands	1	2	3	4	5
Quantity of work output	1	2	3	4	5
Cooperativeness, ability to work with others	1	2	3	4	5
Accepting advise and supervision	1	2	3	4	5
Attendance, reporting for work regularly	1	2	3	4	5
Appearance, presenting appropriate business image	1	2	3	4	5
Safety habits, minimizing chance for accidents	1	2	3	4	5
Being able to talk to the boss about job related problems	1	2	3	4	5
Integrity and dependability, completing jobs thoroughly and completely	1	2	3	4	5
How would you rate the suitability of the employee for the type of job held?	1	2	3	4	5
How would you rate this employee as compared to other beginning employees?	1	2	3	4	5

Please assign letter grade you feel the student trainee has earned this grading period (Circle one letter)

A B C D F

Signature of Evaluator \_\_\_\_\_

TO: All Co-op Students

DATE: March 3, 1980

FROM: Chuck Green

RE: Requirements

As of the spring quarter, 1980, the following requirements will be adhered to by all Co-op students before grading and awarding of credits:

1. Your quarterly objectives that are required in regard to your field experiences will be turned in by the second week of the quarter.
2. Class and work schedules will be turned in and placed in your folders by the second week of the quarter.
3. No student will be entitled to more than three absences without prior permission from the instructor.
4. Student conferences will be met unless other arrangements have been made.
5. Failure to comply to any of the above will necessitate in the negotiation of a grade for both the seminar and field experiences. This negotiation with the instructor could result in either the student receiving a lesser grade, a failure or an incomplete.

hlg

APPENDIX B  
Carpentry Curriculum Materials

**ACTIVITIES:** 'ROUGH' CARPENTRY INCLUDES FRAMING, BOARDING, SHEATHING AND THE INSTALLATION OF SUBFLOORING, PARTITIONS, STUDDING, FLOOR JOISTS AND RAFTERS. 'FINISH' CARPENTRY INCLUDES INSTALLING FINISHED FLOORING, STAIRWORK, SIDING, TRIM, WALLBOARDS, DOORS, WINDOWS AND HARDWARE. THE MORE VERSATILE CARPENTER IS SKILLED IN BOTH FORMS. CARPENTERS OFTEN WORK IN ONE PARTICULAR FIELD SUCH AS BUILDING CONSTRUCTION, INDUSTRIAL OR BUSINESS MAINTENANCE, THEATRICAL PRODUCTIONS OR FOR A PARTICULAR INDUSTRY SUCH AS AIRCRAFT, RAILROADS OR SHIPPING.

**REQUIREMENTS:** ACCURACY, ORDERLY WORK HABITS AND PRIDE IN WORKMANSHIP ARE ESSENTIAL. CARPENTERS MUST BE ABLE TO READ BLUEPRINTS AND SKETCHES, DO FUNDAMENTAL LAYOUT WORK AND BE SKILLFUL IN WORKING WITH WOOD AND USING HAND AND POWER TOOLS. PROSPECTIVE CARPENTERS CAN WORK AS HELPERS AND GRADUALLY LEARN THE TRADE, BUT THE BEST WAY IS TO COMPLETE A FOUR-YEAR APPRENTICESHIP PROGRAM WHICH COMBINES ON-THE-JOB TRAINING WITH CLASSROOM INSTRUCTION. APPRENTICESHIP CANDIDATES MUST BE HIGH SCHOOL GRADUATES BETWEEN 17 AND 27, AND BE APPROVED BY A JOINT LABOR-MANAGEMENT COMMITTEE.

**WORKING CONDITIONS:** CARPENTERS MAY WORK INDOORS OR OUTDOORS, ON HIGH SCAFFOLDS OR MUDDY CONSTRUCTION SITES. MUCH STANDING, STOOPING, CLIMBING AND REACHING IS REQUIRED. THERE MAY BE LAYOFFS DUE TO POOR WEATHER OR MATERIALS SHORTAGES.

**EARNINGS:** STRAIGHT-TIME HOURLY WAGES FOR CARPENTERS RANGED FROM \$5.50 TO \$9.45 IN THE MID-1970'S. APPRENTICES RECEIVED ABOUT HALF THE JOURNEYWORKER'S RATE.

**OUTLOOK:** JOURNEYWORKER CARPENTERS MAY ADVANCE TO FOREMAN OR FOREWOMAN, CONSTRUCTION FOREMAN OR FOREWOMAN, ESTIMATOR, OR SELF-EMPLOYED CONTRACTOR. THE EMPLOYMENT OUTLOOK IS MODERATE, WITH THE BEST OPPORTUNITIES FOR THOSE WHO HAVE COMPLETED THE APPRENTICESHIP PROGRAM. FOR FURTHER INFORMATION, SEE OCCUPATIONAL OUTLOOK HANDBOOK, PAGES 249-251, ALSO SEE ENCYCLOPEDIA OF CAREERS.

FOR MORE INFORMATION CONTACT: ASSOCIATED GENERAL CONTRACTORS OF AMERICA, INC., 1957 E ST. NW., WASHINGTON, D.C.

\*\*\*\*\*  
CARPENTERS

ESTIMATED EMPLOYMENT IN 1974 WAS: 1,060,000  
AVERAGE ANNUAL OPENINGS 1974-85 IS: 49,100

EMPLOYMENT TRENDS AND PROSPECTS:  
PLENTIFUL OPPORTUNITIES OVER LONG RUN RESULTING FROM HIGH REPLACEMENT NEEDS AND AVERAGE EMPLOYMENT GROWTH DUE TO INCREASED CONSTRUCTION ACTIVITY.

\*\*\*\*\*

A CONSTRUCTION INDUSTRY OCCUPATIONAL SUMMARYCARPENTRYNature or Work:

Carpentry is necessary to almost every type of construction activity; it is the largest single building trade in terms of employment.

Some of the many tasks of a carpenter are as follows: sawing, fitting, and assembling wood, plywood, wallboard, etc., which are fastened by nails, bolts, woodscrews or glue to form various structures. The carpenter may also install linoleum or other similar floor coverings. The tools include: hammers, saws, chisels, planes, portable saws, drills and rivet buns.

There are two types of carpentry work -- "rough" and "finish". Skilled carpenters can do both. "Rough" carpentry entails the erection of wood framework in buildings (including subflooring of heavy timbers used in the building of docks, railroads trestles, and similar heavy installations. The finishwork carpenters install molding around floors and ceilings, wood paneling, cabinets, window sash, door frames and hardware. They also build stairs and lay floors. Carpentry is sometimes divided into "residential" and "commercial". The residential carpenter works on homes whereas the commercial carpenter works on large commercial industrial buildings.

Although a journeyman is expected to know all aspects of carpentry work; there is much specialization within the trade. Specialization is more common in cities.

Where employed:

Most carpenters work in the construction industry and are employed mainly by contractors and home builders at the construction site. They work principally on building construction, although many are employed on highway or other non-building projects. Many carpenters alternate between wage employment for contractors and self-employment on small jobs. Some work for government agencies or non-construction firms which employ a separate work force to do their own construction work. Others do maintenance work in large establishments, e.g. factories, hotels, office buildings, etc..

Training, Other Qualifications and Advancement

Many carpenters learn the trade informally on the jobs. Formal training is a 4-year course of instruction and on-the-job train-

Apprenticeship applicants should be at least 17 years of age, in good physical condition, a good sense of balance, manual dexterity, and the ability to solve arithmetic problems quickly and accurately. These are among the requirements.

The apprenticeship program which consists of 8,000 hours of on-the-job training as well as a minimum of 576 hours of related classroom instruction includes learning to use, care for, and handle safely, the tools, machines, equipment and materials commonly used in the trade as well as learning to build forms for holding concrete, rough framing, finishing work, fitting of hardware and layout of doors, windows, and partitions, drafting, blueprint reading, mathematics applicable to layout work, and the use of woodworking machines.

The starting hourly wage rate for apprentices varies with each area but is usually about 50% of the journeyman's rate and usually increase by about 5% in each six-month period until a rate of 85 to 90% is reached during the last period of apprenticeship.

A carpenter may advance to the status of carpenter foreman of general construction foreman. Some become contractors.

#### Employment Outlook

It is expected that the demand for trained carpenters during the 1970's will be excellent. This demand has been due to a steady increase in construction activity and replacement needs on account of deaths and retirements.

#### Apprenticeship Training Opportunities in Your Locality:

Young men and women interested in local apprenticeship training opportunities should contact one or more of the following sources for specific details:

1. General Contractors
2. Local Employer Associations
3. Public School Vocational Education Facilities
4. State Apprenticeship Director
5. State Apprenticeship Council
6. Local Representative of the Bureau of  
Apprenticeship and Training, U. S.  
Department of Labor

This Summary was Prepared By  
The Associated General Contractors of  
America, Inc.  
1957 E. Street, N. W.  
Washington, D. C. 20006

### Task Analysis - Carpenter

- I. Interprets directions from blueprints, makes corrections, and understands symbols and codes used.
- II. Supervises excavation and laying out of buildings.
- III. Selects building materials and calculates orders and costs.
- IV. Uses proper tools for the job and maintains tools.
- V. Lays out, cuts, and erects foundation forms.
- VI. Installs rough framing by laying out, cutting and erecting wall sections, ceiling joists, floor joists and sub-flooring.
- VII. Lays out, cuts and installs roof components such as ridge board, rafters, gable ends, sheathing, tresses, and shingles.
- VIII. Cuts and installs exterior windows, door frames, fascia, soffit, moldings and wall finish.
- IX. Cuts and installs wallboard, paneling, ceiling, flooring, doors, trim, and cabinets.
- X. Lays out, cuts, and installs stair components such as stringers, risers, treads, balusters and handrails.

## HOW TO USE THE TRAINING PLAN

The following training plan has been developed as a guide for you and your employer. Each of the tasks has been checked as being acquired at school, on the job or through independent study. This is not a hard and fast guide and will be flexible to fit your needs and the needs of your employer.

Not all tasks will be learned in the sequential order in which they are listed. Again, this will depend on the requirements of your training station when you enter it. All tasks should be accomplished in one of the three ways, however, during your course of study at Lake Land College. A periodic review of the training plan will help you assess your progress and plan for future work experiences.



TRAINING PLAN  
CARPENTRY

	School	Job	Independent Study	Evaluation	Comment
Reading Blueprints and Preparing Specifications:					
1. Apply for building permits	X	X	X		
2. Design and sketch working drawings for cabinets	X		X		
3. Determine dimensions of a house from plans	X		X		
4. Estimate labor costs from plans and specs			X		
5. Interpret instructions in pictorial exploded detail drawings in the assembly of a cabinet	X				
6. Follow oral instructions given by supervisors as specs	X	X			
7. Identify American Institute of Architects (AIA) building symbols	X				
8. Identify American standard plumbing symbols	X				
9. Identify commonly used abbreviations for building terms	X				
10. Identify dimensioning methods used on plans	X				
11. Identify dimensions applicable to framing work	X				
12. Identify dimensions applicable to masonry work	X				
13. Identify electrical symbols	X				
14. Identify heating, ventilating, and air conditioning installation symbols	X				
15. Identify plot plan information such as reference points and bench marks	X				
16. Identify standard masonry symbols	X				
17. Identify door and window specs and their location on the plans in relation to door and window schedules	X				
18. Interpret and work from multiview drawings	X		X		
19. Interpret architectural specifications	X				

	S	T	S	H	C
20. Interpret building codes	X		X		
21. Interpret notations used on blueprints	X		X		
22. Itemize material orders from plans and specs for framing materials	X		X		
23. Lay out construction based upon modular standards	X		X		
24. Locate center lines for layout	X				
25. Locate special installation on detail drawings	X				
26. Make minor revisions in plans as specified by bldr.	X	X			
27. Measure w/architect's scale	X				
28. Sketch and draw rough detail (working) drawings	X				
29. Sketch rough pictorial drawings	X				
Preparing Building Site					
1. Establish elevation reference points from a bench mark with builder's level or transit	X	X			
2. Establish footing grades with builder's level or transit	X	X			
3. Establish plot boundary lines or property lines	X	X			
4. Supervise the excavation of a building site to specs		X			
5. Prepare applications for required construction inspections			X		
6. Supervise filling operations around foundation walls		X			
7. Supervise the installation of drainage systems for footings and foundations	X	X			
8. Identify requirements and restrictions in local zoning laws	X		X		
9. Lay out building site w/transit	X	X			
10. Locate and square corners using builder's transit	X	X			
11. Locate and square corners using triangulation, parallel and diagonal methods	X	X			

	S	D	S	H	C
12. Locate and mark excavation lines	X	X			
13. Locate building site in relation to property lines	X	X			
14. Supervise site preparation for slab-on-ground construction		X			
15. Install batter boards for rough excavation and footings		X			
16. Set grade stakes at proper elevation		X			
Selecting and Using Building Materials					
1. Calculate cost of building materials purchased in quantity		X	X		
2. Check and receive material orders upon delivery		X			
3. Fill out material orders			X		
4. Identify actual sizes of milled lumber in relation to nominal sizes			X		
5. Identify defects and blemishes that affect durability and strength of lumber			X		
6. Stock and care for lumber		X			
7. Identify abbreviations commonly used in working w/lumber	X		X		
Using Hand and Power Tools					
1. Bore holes w/electric drill using augers and expansion bits		X			
2. Check and align installations for level and plumb w/carpenter's level		X			
3. Copy and transfer angles using sliding T-level, framing combination squares as layout tools		X			
4. Cut chamfers w/table saw		X			
5. Cut compound miters with table saw		X			
6. Cut dado w/portable router		X			
7. Cut gains for door hinges w/portable router		X			
8. Cut holes w/hole saw		X			

	S	T	S	I	O
9. Cut irregular shaped patterns w/saber and band saws		X			
10. Cut irregular shapes w/portable router		X			
11. Cut large sheets of plywood and wallboard w/table saw		X			
12. Cut small trim stock w/copying saw or power miter saw		X			
13. Drill bore holes w/the portable hand drill		X			
14. Glue wood stock w/hand and bar clamps		X			
15. Identify job safety requirements	X		X		
16. Use personal protective equipment		X			
17. Install dowels in common wood joints		X			
18. Install splines in common wood joints		X			
19. Joint stock w/the jointer		X			
20. Make butt joints		X			
21. Make dado joints		X			
22. Make lap joints		X			
23. Make miter joints		X			
24. Make mortise and tenon joints		X			
25. Make rabbit joints		X			
26. Plane stock to specified sizes w/hand planes		X			
27. Plane stock to thickness w/single surface planer (surfacer)		X			
28. Plane stock w/the power hand plane		X			
29. Read and measure w/rules and squares		X	X		
30. Rip plywood w/portable saw		X			
31. Sand finish materials by hand		X			
32. Sand surfaces and edges w/belt sander		X			
33. Select proper hammer and drive various types and sizes of nails		X	X		

	S	T	S	I	C
34. Service and maintain portable woodworking power tools		X	X		
35. Set nails w/nail set and apply wood filler		X			
36. Shape edges on wood shaper		X			
37. Shape stock using outline pattern		X			
38. Care for handsaws		X			
39. Sharpen and care for wood chisels		X			
40. Sharpen plane irons and care for hand planes		X			
41. Sharpen twist drills and augers		X			
42. Trim and cut laminate joints w/a portable router		X			
Building and Installing Foundation Forms					
1. Align form walls		X			
2. Brace foundation wall forms		X			
3. Calculate concrete for footings and foundation walls		X	X		
4. Calculate the quantity of concrete blocks for block wall		X	X		
5. Clean and repair forms		X			
6. Construct concrete step and stair forms		X			
7. Construct double wall panel foundation forms		X			
8. Construct frames for special openings in foundation walls		X			
9. Construct column as pier forms		X			
10. Construct single wall foundation forms		X			
11. Construct square type footing forms		X			
12. Construct "T" type footing form		X			
13. Design footings for soil conditions		X	X		
14. Frame for pocket to receive heavy wooden beams in concrete walls		X			

	S	T	S	E	C
15. Attach wooden beams to wood or steel columns		X			
16. Form intersecting walls at corners		X			
17. Install anchor bolts in concrete block walls		X			
18. Install battered forms		X			
19. Install bulkheads		X			
20. Install door and window opening bucks		X			
21. Install exterior wall pilaster		X			
22. Install expansion and contraction joints in concrete		X			
23. Install key-wrap for footing and foundations		X			
24. Install open step forms		X			
25. Install vapor barriers		X			
26. Install water seal at footing elevation		X			
27. Install walers and form ties		X			
28. Make templates for columns		X	X		
29. Set anchors and dovetail anchor bolts in concrete		X			
30. Set screeds for concrete floors and walkway		X			
31. Waterproof concrete block walls		X			
Cutting and Installing Rough Framing					
1. Align and brace a wall from corner to corner		X			
2. Apply sub-bases over sub-floors		X			
3. Build and erect double-pole scaffolds		X			
4. Build and erect single-pole scaffolds		X			
5. Build box beams		X			
6. Build corner posts		X			
7. Build saw horses		X			
8. Check foundation for squareness		X			

	S	D	S	E	C
9. Frame a built-up stair stringer (or horse)		X			
10. Frame a cleated type stair stringer (or horse)		X			
11. Frame a plumbing partition for soil and vent pipes		X			
12. Frame exterior walls		X			
13. Frame and align a partition wall		X			
14. Frame and install a built-up "T" sill		X			
15. Frame and install box sills		X			
16. Frame built-up girders		X			
17. Frame floor openings		X			
18. Frame a wall opening		X			
19. Fill masonry walls		X			
20. Identify framing members	X		X		
21. Install backing for hanging fixtures		X			
22. Install bridging between joists		X			
23. Install ceiling joists strongbacks		X			
24. Cut and install ceiling (frame) joists		X			
25. Install diagonal bracing		X			
26. Install firestops		X			
27. Install floor joists		X			
28. Install lally posts		X			
29. Install sill plates to foundation wall		X			
30. Install post and beam framing		X			
31. Install steel beams		X			
32. Install structural sheathing		X			
33. Lay out a framing story pole		X			
34. Lay out and frame stair well opening		X			

	S	T	I	S	E	C
35. Install backing on walls parallel to ceiling joist		X				
36. Lay sub-floors		X				
37. Set and align girders		X				
38. Set metal door and window frames for masonry construction		X				
Laying Out Cutting and Installing Roof components						
1. Apply insulation (underlay) for asphalt shingles		X				
2. Build roof trusses		X				
3. Calculate the rise and run of a common roof	X			X		
4. Determine length of rafters from the rafter scale	X	X		X		
5. Flash chimney and roof vents		X				
6. Flash valleys for asphalt shingles		X				
7. Frame dormers		X				
8. Frame for roof saddle		X				
9. Frame a plank and beam roof		X				
10. Frame roof openings for chimney		X				
11. Frame a snub gable		X				
12. Install and align ridge boards		X				
13. Install asphalt composition (strip shingles)		X				
14. Install built-up roofs		X				
15. Lay out, cut and install collar ties		X				
16. Install gable louvers		X				
17. Install hip and ridge asphalt shingles		X				
18. Install roof louvers		X				
19. Install roof sheathing		X				
20. Lay out, cut and install tail rafters for open cornices		X				



	S	T	S	E	C
21. Install valley shingles		X			
22. Install wood shingles		X			
23. Lay out, cut and install ceiling joist		X			
24. Lay out, cut and install common rafters for equal-pitch roof		X			
25. Lay out, cut and install common rafters for unequal pitch roof		X			
26. Lay out a common roof plan	X		X		
27. Lay out, cut and install cripple jack rafters for hip and valley installations		X			
28. Lay out for bonding shingles over dormers (or other roof appendages)		X			
29. Lay out, cut and install gable studs		X			
30. Lay out, cut and install gambrel roof rafters		X			
31. Lay out, cut and install hip rafters for equal pitch roofs		X			
32. Lay out, cut and install hip rafters for unequal pitch roofs		X			
33. Lay out, cut and install intersecting gable roofs		X			
34. Lay out, cut and install hip jack rafters		X			
35. Lay out, cut and install purlins		X			
36. Lay out, cut and install valley rafters for equal pitch roofs		X			
37. Lay out, cut and install valley rafters for unequal pitch roofs		X			
38. Lay out wall plates and ridgeboard to receive rafters		X			
<b>III. Cutting and Installing Exterior Finish</b>					
1. Apply composition (asbestos shingle) siding		X			
2. Build a porch cornice		X			
3. Build a projected box cornice (brick veneer construction)		X			

	S	C	S	H	C
4. Build a (closed) box cornice		X			
5. Build open cornices		X			
6. Calculate cost of siding for outside walls		X	X		
7. Case exterior windows for brick veneer construction		X			
8. Construct (and install) casement window frames		X			
9. Construct and install exterior door frames for masonry constr.		X			
10. Install metal corners for wall siding		X			
11. Glaze windows		X			
12. Install brick molding for brick veneer constr.		X			
13. Install fiberboard sheathing		X			
14. Install corner boards for wood siding		X			
15. Install double-hung window frames		X			
16. Install gable trim		X			
17. Install finished columns and beams		X			
18. Install outside door trim		X			
19. Install overhead (garage) doors		X			
20. Install wrought iron newels, posts, and railings on a porch		X			
21. Install metal or vinyl siding		X			
22. Install prefabricated storm doors and windows		X			
23. Install siding on gable walls		X			
24. Install watertable for wood siding		X			
25. Install wood type bevel and lap siding		X			
26. Make an outside corner w/wood shingles		X			
IX. Cutting and Installing Interior Finish					
1. Apply finishes		X			
2. Apply prefinished hardboard		X			

	S	J	I S	E	C
3. Assemble cabinet frame		X			
4. Build broom or storage closets to specifications		X			
5. Construct and install cupboard and cabinet doors		X			
6. Cut and install soffits above cabinets		X			
7. Build cupboard and cabinet drawers		X			
8. Build and install interior door jambs		X			
9. Build revolving shelves (lazy-susan type) in cabinets		X			
10. Repair wood framed window screens		X			
11. Construct built-in units such as bookcases and dressing tables to specs		X			
12. Cut and install baseboards		X			
13. Cut and install ceiling molding and trim		X			
14. Cut and install window trim		X			
15. Resurface interior wooden surfaces containing scratches and dents		X			
16. Fit and hang interior doors		X			
17. Install accessories in walk-in clothes closet		X			
18. Install corner cabinets		X			
19. Install double-acting door		X			
20. Install dry-wall boards		X			
21. Install entrance and interior door lock sets		X			
22. Install fireplace mantels		X			
23. Install gypsum board lath		X			
24. Install interior folding doors		X			
25. Install interior sliding doors		X			

	S	J	I	S	E	C
26. Install layment for pre-fabricated wallboards		X				
27. Install medicine cabinets		X				
28. Install metal corners for dry wall		X				
29. Install metal lath		X				
30. Install plaster grounds		X				
31. Install prefabricated (mill built) kitchen cabinets		X				
32. Install prefabricated metal cabinets		X				
33. Install prefabricated panel and panel trim		X				
34. Install wall picture molding		X				
35. Install window hardware		X				
36. Lay composition (block) flooring on concrete slab		X				
37. Lay single layer tongue and groove flooring		X				
38. Rough in framing for cabinet sink		X				
39. Trim interior door openings		X				
Laying Out, Cutting and Assembling Stair Components						
1. Assemble and erect pre-fabricated (mill built) stairs		X				
2. Calculate riser height	X			X		
3. Calculate tread width in relation to stair runs	X			X		
4. Construct a bullnose or swelled-step riser		X				
5. Cut and install treads for open riser stairs		X				
6. Cut, fit, and install balusters and handrails		X				
7. Fit newel posts in open stairs		X				
8. Install stair skirt		X				
9. Lay out a straight run stringer using a carpenter's square		X				
10. Lay out a straight two-flight stairs w/one landing		X				
11. Lay out a housed stringer		X				

## AAS CHECK LIST - CO-OP

		<u>Completed Courses</u>			
		<u>Transfer</u>	<u>LLC</u>	<u>Total</u>	
		<u>Hrs.</u>	<u>Hours</u>	<u>Hours</u>	<u>Completed</u>
<u>Communications Skills:</u>					
Communications I or Composition I		4	_____	_____	_____
(2.050 or 42.120)					
Public Speaking (94.131)		4	_____	_____	_____
<u>Mathematics/Science:</u>					
Math. (62.122 or above) or		4	_____	_____	_____
Life Science (56.100 or above or					
Physical Science (84.100 or above)					
<u>Social Science:</u>					
Human Relations (90.050)		8	_____	_____	_____
Elective (--.040 or above)					
<u>Health:</u>					
Health/P.E.		4	_____	_____	_____
					24 hr
<u>Co-op:</u>					
Field Experience I	30.050	5	_____	_____	_____
Seminar I	30.051	1	_____	_____	_____
Field Experience II	30.052	5	_____	_____	_____
Seminar II	30.053	1	_____	_____	_____
Field Experience III	30.054	5	_____	_____	_____
Seminar III	30.055	1	_____	_____	_____
Field Experience IV	30.076	5	_____	_____	_____
Seminar IV	30.077	1	_____	_____	_____
Field Experience V	30.078	5	_____	_____	_____
Seminar V	30.079	1	_____	_____	_____
Field Experience VI	30.080	5	_____	_____	_____
Seminar VI	30.081	1	_____	_____	_____
					36 hr
Electives (Carpentry)					
Tech. Math. I	95.053	4	_____	_____	_____
Tech. Math. II	95.054	4	_____	_____	_____
Surveying I	24.060	4	_____	_____	_____
Surveying II	24.061	4	_____	_____	_____
Blue Print Reading	35.040	4	_____	_____	_____
Tech. Drafting	35.050	4	_____	_____	_____
Arch. Drafting I	35.051	4	_____	_____	_____
Arch. Drafting II	35.052	4	_____	_____	_____
Elec. Drafting	35.083	4	_____	_____	_____
Building Const.	55.042	4	_____	_____	_____
Office Acct.	23.062	4	_____	_____	_____
Small Bus. Mang.	23.084	4	_____	_____	_____
Intro. to Bus.	23.142	4	_____	_____	_____
					36 hr
Total:					96 hr

## 96 hrs. - Associate in Applied Science

CARPENTRY

## 6 qtr. Course Schedule

1st (fall)		2nd (winter)	
Field Exp. I	5	Field Exp. II	5
Seminar I	1	Seminar II	1
*Comm. I/Comp. I	4	*Human Rel.	4
*OSHA	2	*First Aid/Safety	2
Tech. Math. I	4	Tech. Math. II	4
	<u>16</u>		<u>16</u>
3rd (spring)		4th (fall)	
Field Exp. III	5	Field Exp. IV	5
Seminar III	1	Seminar IV	1
*Math/Science	4	Surveying II	4
Surveying I	4	Tech. Draft.	4
Blueprint Reading	4		<u>14</u>
	<u>18</u>		
5th (winter)		6th (spring)	
Field Exp. V	5	Field Exp. VI	5
Seminar V	1	Seminar VI	1
*Sco. Sci (elec)	4	Arch. Draft. II	4
Arch Draft. I	4	Elective	4
*Public Speaking	4		<u>14</u>
	<u>18</u>		

24 Hours general ed. \*

36 Hours co-op/field exp. &amp; seminar

36 Hours related electives

\*College transfer

# General Education Requirements

24 hours

## COMMUNICATION SKILLS

8 hours

### \*42.100 Communication I

4 hours

This course focuses on development of practical skills in oral and written communication. The course will utilize a wide variety of films, slides, transparencies, tapes, and individually oriented programmed materials. The course will include an introduction to sentence structure and paragraph, report and precise writing.

or

### \*42.120 Composition I

4 hours

This basic course in communications includes listening, reading, speaking and writing. Many short themes are required to develop facility in writing correct, effective sentences and paragraphs. Rhetorical and grammatical principles and their application to expression are considered on an individual basis.

and

### \*94.131 Public Speaking

4 hours

This course focuses on the fundamental principles and methods of selecting, analyzing, organizing, developing, and communicating information, evidence, and points of view for constructive influence in speech situations.

## MATH/SCIENCE

4 hours

### \*62.122 Mathematics for Elementary Teachers I

4 hours

(or

above)

This course focuses on systems of numerations, set theory, relations, systems of whole numbers, bases, and systems of integers.

(prerequisite: one year high school algebra or 62.001 - preparatory mathematics)

or

### \*56.100 Life Science (class 2, Lab 4, lab fee \$2.00)

4 hours

(or

above)

This course focuses on the fundamental processes

and structures common to all living things and which are, therefore, basic to an understanding of both plants and animals.

or

\*84.100 Physical Science (Class 2 lab. 4, lab. fee \$4.00)

4 hours

(or

above)

This course focuses on the basic concepts of physical science through study of topics selected from physics and astronomy.

#### SOCIAL SCIENCE

90.050 Human Relations

8 hours

4 hours

This course is designed to provide an understanding of the human mechanism when associated with inter-personal relationships on the job. Emphasis is placed on vocational and industrial problems connected with motivation, job satisfaction, self evaluation, working with others, job interviews, job selections, self-improvement, frustration, and other adjustment problems faced by an individual in a highly industrialized society.

and

(.040 or

above)

One course (4 hours) in anthropology, psychology, sociology, geography, history, political science, or economics.

#### HEALTH/PHYSICAL EDUCATION

95.061 OSHA for Construction

4 hours

2 hours

This course focuses on the William Steiger Occupational Safety and Health Act as it pertains to the construction industry.

\*48.178 First Aid and Safety I

2 hours

This course is designed to provide the student with methods and skills to secure the American Red Cross Standard First Aid Card. Portions of the course will be devoted to safety education.



## Co-op - 36 hours

30.050	Field Experience I	5 hours
30.051	Seminar I	1 hour
30.052	Field Experience II	5 hours
30.053	Seminar II	1 hour
30.054	Field Experience III	5 hours
30.055	Seminar III	1 hour
30.076	Field Experience IV	5 hours
30.077	Seminar IV	1 hour
30.078	Field Experience V	5 hours
30.079	Seminar V	1 hour
30.080	Field Experience VI	5 hours
30.081	Seminar VI	1 hour

### Electives

Course Descriptions - Carpentry		36 hours
95.053	<u>Technical Mathematics I</u>	4 hours
(62.130)	<p>This course focuses on basic algebra, and simple slide rule operations, right triangle trigonometry, scientific notation, monomial and polynomial expressions, algebraic manipulation, and linear equations.</p> <p>tech.math. (with consent of Division Chairman)</p>	
95.054	<u>Technical Mathematics II</u>	4 hours
	<p>This course is sequential to technical Mathematics I. Emphasis is placed on <u>trigonometry</u>, equations of a line, systems of equations, determinants, exponents, and oblique triangles.</p> <p>(Prerequisite: 95.053)</p>	
24.060	<u>Surveying I</u> (Class 2 - Lab. 4 - Lab. fee \$3.00)	4 hours
(spring)	<p>This course focuses on the use and care of surveying equipment, fundamental concepts of horizontal, vertical, and angular measurements, basic surveying operations.</p> <p>(Prerequisite 95-054)</p>	
24.061	<u>Surveying II</u> (Class 2, Lab. 4, Lab. fee \$3.00)	4 hours
	<p>This course is designed to apply the skills learned in Surveying I to practical problems such as: closed traverse, area calculations, land surveying, topographic mapping, stadia surveys, and difficult level circuits.</p> <p>(Prerequisite 24.060)</p>	
35.040	<u>Blueprint Reading for Construction</u>	4 hours
	<p>This course focuses on construction communication pertaining to architectural working drawings and shop drawing. Emphasis is placed on the interpretation of drawings and specifications from actual working drawings involving all types of commercial buildings.</p>	

35.050     Technical Drafting (Class 1 - Lab. 7, lab fee \$3.00)     4 hours

This course is an introductory overview of general drafting. Emphasis is placed on freehand sketching, instrument drawing, orthographic views, sectioning, dimensioning, and general blueprint reading.

35.051     Architectural Drafting I (Class 1, Lab. 7, Lab fee \$3.00)     4 hours

(winter)     This course focuses on the basic fundamentals of architectural drawing. Emphasis is placed on drafting techniques, lettering, methods of showing plans, elevations, sections, dimensions, and elementary architectural detailing.

(Prerequisite: 35.050 or equivalent)

35.052     Architectural Drafting II (Class 1, Lab. 7, Lab fee \$3.00)     4 hours

(spring)     This course focuses on the development of architectural working drawings. Students prepare working drawings from preliminary design drawings. The problems presented have varied material and structural systems, differing occupancies, etc. offering a series of new experiences in architectural drawing.

(Prerequisite: 35.051)

35.083     Electrical Drafting (Lab fee \$3.00)     4 hours

This course focuses on electrical sources, materials and distribution for architectural and building construction technology. Emphasis is placed on electrical codes, layout of electrical requirements, estimating electrical requirements, reading and understanding of electrical working drawings for various architectural and building construction.

55.042     Building Construction     4 hours

(Fire Science)     Analysis of various methods of building construction, various types of constructional materials and basic principle of construction design. Also covered are the fire resistant features of materials, life safety methods of construction, and an introduction to fire codes and laws.

23.062     Office Accounting

4 hours

This course is designed to give the student knowledge of accounting principles and techniques.

23.084     Small Business Management

4 hours

This course attempts to isolate and provide solutions to problems encountered by individuals who desire to own and/or manage a small business enterprise. Content includes: areas of opportunity and the outlook for small business operations, self analysis of the potential small business manager, success and failure patterns, capital needs and capital sources, organizing, directing, and controlling the small business, financial management, locations, facilities, personnel relations, advertising, pricing, consumer credit, and inventory control.

23.142     Introduction to Business

4 hours

This course covers the function, objectives, organization, and role of business in a free-enterprise system. The course is designed to provide an over-view of the field of business for the student as a consumer and/or to provide a framework into which specialized fields of study may be viewed in perspective to the total field of business.

Library Resources

Carpenters & Builders Library TH 5604 .U44 1970

Carpenters' Square TH 5619 .H64

Carpenters' Tools TH 5618.S5

Carpentry in Residential Construction TH 5604 .B23

Fundamentals of Carpentry TH 5606 .D822

Building Construction Carpentry TH 5604 .E513

Wood Construction data TH 1101 .N3

Carpentry & Building TH 146 .U4

Related Mathematics for Carpenters TH 5612 .R4

Doors & Windows (Time-Life) TH 2270 .T55 1978

Floors and Stairways (Time-Life) TH 2521 .T55 1978

Building for Self-sufficiency TH 4612 .C52 1977

Build Your Own Low-cost Home TH 4815 .A5 1972

Low Cost, Energy-efficient Shelter TH 4815 .L68

How To Build Your Own Home TH 4815 .R48

Do It Yourself Contracting TH 4815.5 .S74 1974

Roof Framing TH 2393 .S57

Do It Yourself Roofing TH 2231 .A4

Thermal Design of Buildings TH 1715 .R54

Roofs and Siding (Time Life) TH 2401 .T55 1977

Building Codes TH 425 .05

Building Construction TH 145 .H8 1963

Building Construction & Design TH 1065 .U84

Construction Contracting TH 425 .055  
Specifications Writing TH 425 .W38  
Standard Structural Details TH 2031 .N4  
Architectural Graphic Standards TH 2031 .R35 1970  
Builders Encyclopedia TH 9 .U45  
Construction Estimating TH 435 .D35  
Construction Estimates from Take-off to Bid TH 435 .G72 1961a  
Construction Inspection Handbook TH 439 .027  
Simplified Site Engineering TH 153 .P3  
Building Trades Blue Print Reading TH 431 .S82  
  
Cabinet Making & Millwork TT 197 .D25  
General Woodworking TT 197 .G7  
Cabinet Making for Beginners TT 197 .H38 1971  
Shelves, Closets & Cabinets TT 197 .J66  
Space & Storage (Time-Life) TT 197 .T48 1976  
Cabinet Making & Millwork TT 197 .F45  
Cabinets & Built-ins TT 197 .S54  
  
Fine Furniture for the Amateur Cabinet Maker TS 880 .M37  
Woodshop Tool Maintenance TS 850 .C8  
Essentials of the Theory of Structures TA 405 .J6  
The International Guide to Wood Selection TA 419 .L399  
Wood Structural Design Data TA 666 .N28  
Simplified Design of Roof Trusses TG 500 .P3 1953

The Home Tool Kit TJ 1195 .H27

Tools and Their Uses TJ 1180 .U49

Tool Identification Kit (KIT) TJ 1200 .T6

Know Your Woods SD 434 .C65 1972

## CARPENTRY-MAGAZINES

Automation in Housing and Systems Building News  
(3740 Dempster St., Skokie, IL 60076)

Building Supply News (5 South Wabash Ave., Chicago, IL 60603)

House and Home (McGraw-Hill Inc., 330 W. 42nd St., New York, NY 10036)

\*Professional Builder (5 S. Wabash Ave., Chicago, IL 60603)

Wood and Wood Products (300 W. Adams St., Chicago, IL 60606)

Architectural Digest (5900 Wilshire Blvd., Los Angeles, CA 90036)

\*Architectural Record (1221 Ave. of the Americas, New York, NY 10020)

Progressive Architecture (600 Summer St., Stamford, CONN 06904)

Hudson Home Guides (289 S. San Antonio Rd., Las Altos, CA 94022)

\*House Beautiful (717 Fifth Ave., New York, NY 10022)

\*Available to LLC Library

## Career Guidance Center

"A Day in the Life of a Carpenter" - filmstrip

Carpentry As a Career - booklet

Carpentry As an Occupation - leaflet



## CARPENTRY APPRENTICESHIP PROGRAM

### Application

The carpenter's local advertises in newspapers, employment offices and schools when they are in need of apprenticeship trainees. Applicants must live in the district served by the local and must take a general qualifying test. Those who pass the test at 70% or better then receive a personal interview. During the interview they are given rating points for such things as educational background, work experience, etc. Those receiving the highest point totals will then be notified of their acceptance as carpenter apprentices.

### Training

The apprenticeship program takes four years to complete. The beginning wage is 60% of the prevailing journeyman rate and it is raised 5% every six months. The trainee is evaluated every three months via a report from his employer and every six months by a committee composed of three union people and three contractors. In addition to the work experience training, the apprentice attends class one night a week and must accumulate at least 144 clock hours per year.

### Certification

Upon completion of the four-year training plan, the apprentice will be certified as a qualified journeyman carpenter by the Carpenter's Union and also by the U. S. Department of Labor.

APPENDIX C  
Automotive Mechanic Curriculum Materials

## AUTOMOTIVE MECHANIC

### Task Analysis

- I. Performs Engine Overhaul Activities
- II. Maintains and Repairs Power Trains
- III. Maintains and Repairs Automatic Transmissions
- IV. Maintains and Repairs Electrical Systems
- V. Maintains and Repairs Fuel Systems
- VI. Maintains and Repairs Cooling Systems
- VII. Maintains and Repairs Standard and Power Steering Units
- III. Maintains and Repairs Braking Systems
- IX. Maintains and Repairs Front Ends
- X. Maintains and Repairs Automobile Air Conditioners
- XI. Maintains and Repairs Automobile Heaters - (heater cores  
are usually taken to radiator specialist)

TRAINING PLAN  
AUTOMOTIVE MECHANIC

	School	Job	Independent study	Evaluation	Comment
Performing Engine Overhaul Activities					
1. Adjust intake and exhaust valves	X	X			
2. Steam clean engine	X	X			
3. Clean engine parts and check for condition	X	X			
4. Diagnose valve train and head malfunctions	X	X			
5. Disassemble engine	X	X			
6. Fit piston rings	X	X			
7. Grind valves	X	X			
8. Replace crankshaft and main bearings	X	X			
9. Inspect and correct bearing fit	X	X			
10. Inspect crankshaft and connecting rod assembly	X	X			
11. Inspect exhaust system	X	X			
12. Inspect head for warp	X	X			
13. Replace exhaust manifold (s)	X	X			
14. Perform cylinder compression test	X	X			
15. Perform cylinder balance test	X	X			
16. Perform cylinder leakage test	X	X			
17. Perform operational inspections of positive crankcase ventilation system	X	X			
18. Perform operational inspections of the engine lubrication system	X	X			
19. Remove engine from vehicle	X	X			
20. Replace connecting rods and bearings	X	X			
21. Replace engine mounts	X	X			

## AUTOMOTIVE MECHANIC

	S	J	I	S	E	C
22. Replace flywheel and flywheel ring gear	X	X				
23. Replace camshaft and camshaft bearings	X	X				
24. Replace timing gears and chains	X	X				
25. Replace gaskets, seals, and valve lifters	X	X				
26. Replace muffler	X	X				
27. Remove and replace oil pump	X	X				
28. Remove and replace oil pans	X	X				
29. Replace pistons, piston rings, gaskets and seals	X	X				
30. Replace tailpipe assemblies	X	X				
31. Replace valves, valve guides and valve seals	X	X				
32. Resurface valve seats	X	X				
33. Service rocker arm assembly	X	X				
<b>II. Maintaining and Repairing Power Trains</b>						
1. Adjust external shift linkage on manual transmission		X				
2. Adjust clutch		X				
3. Diagnose differential malfunctions		X				
4. Inspect drive shaft, U-joint and center bearings		X				
5. Lubricate or replace speedometer cable and housing		X				
6. Lubricate universal joints		X				
7. Rebuild manual transmission		X				
8. Repair hydraulic-type clutch		X				
9. Repair or replace differential		X				
10. Replace spider gears (pinion)		X				
11. Replace universal joints		X				

## AUTOMOTIVE MECHANIC

	S	C	S	E	C
12. Repair, replace or adjust front drive axle assemblies	X				
13. Replace mechanical-type clutch	X				
14. Replace manual transmission	X				
15. Replace manual transmission rear seal, gasket, and bushing	X				
16. Replace pinion seal	X				
17. Replace pilot bearing	X				
18. Replace rear axle shaft, bearing and seal	X				
19. Replace speedometer drive gear	X				
20. Replace clutch release bearings (throw out bearings)	X				
21. Replace transmission mounts	X				
22. Test manual transmission operation	X				
Maintaining and Repairing Automatic Transmissions					
1. Shift floor linkage	X				
2. Adjust column-type linkage	X				
3. Adjust linkage from engine to automatic transmission	X				
4. Clean and visually inspect transmission	X				
5. Diagnose, replace or adjust modulators	X				
6. Inspect and repair transmission cooling system	X				
7. Inspect, remove and replace converter	X				
8. Inspect and replace front pump, seal and bushings	X				

## Automotive Mechanic

	S	J	I	S	E	C
9. Install automatic transmission cooler (external type)		X				
10. Make band adjustments (internal or external)		X				
11. Overhaul automatic transmission		X				
12. Perform operational tests on automatic transmission		X				
13. Remove and install automatic transmission		X				
14. Replace external seals, gaskets, and lines on automatic transmission		X				
15. Replace or adjust neutral safety switch		X				
16. Service filter		X				
IV. Maintaining and Repairing Electrical Systems						
1. Adjust headlights	X	X				
2. Adjust backup light switches	X	X				
3. Analyze or adjust engine performance using engine analyzer	X	X				
4. Analyze cause of electrical fires	X	X				
5. Analyze malfunctions in the cranking system	X	X				
6. Clean, gap and test spark plugs	X	X				
7. Evaluate alternator / generator and regulator output	X	X				
8. Inspect secondary circuit lead wires, distributor cap and rotor	X	X				
9. Measure resistance in secondary wires	X	X				
10. Inspect ignition switch, resistor, wiring and coil of the primary circuit	X	X				
11. Inspect points and condensor of the primary circuit	X	X				

## Automotive Mechanic

	S	J	S	I	C
12. Locate and repair shorts and open circuits in wiring	X	X			
13. Overhaul distributors	X	X	X		
14. Perform operational inspection of lighting systems	X	X			
15. Repair or replace charging system regulators	X	X			
16. Repair generators or alternators	X	X			
17. Repair or replace fuse box assembly	X	X			
18. Repair or replace lighting system components	X	X			
19. Repair or replace switches	X	X			
20. Replace solenoids	X	X			
21. Repair starters	X	X			
22. Repair windshield wiper mechanisms and controls	X	X			
23. Replace and adjust distributors	X	X			
24. Replace chassis and underhood wiring	X	X			
25. Replace coil of the primary circuit	X	X			
26. Replace flasher units	X	X			
27. Replace generators and alternators	X	X			
28. Replace ignition switch and resistor	X	X			
29. Replace points and condensor	X	X			
30. Replace starters	X	X			
31. Service or replace batteries, cables and battery box	X	X			
32. Set ignition timing	X	X			
33. Strobe distributor, and modify or correct advance curves	X	X			
34. Test and repair cruise control units	X	X			
35. Test and rewire dash units	X	X			
36. Test and repair transistor ignition systems	X	X			



## Automotive Mechanic

	S	J	I	S	E	C
<b>Maintaining and Repairing Fuel Systems</b>						
1. Adjust carburetor	X	X				
2. Analyze for moisture or foreign particle level in fuel system						
3. Clean carburetor	X	X				
4. Clean or replace fuel filter	X	X				
5. Inspect, clean and adjust choke unit (automatic and manual)	X	X				
6. Inspect, service, or replace carburetor air cleaner	X	X				
7. Replace gas tank sending unit	X	X				
8. Install carburetor	X	X				
9. Measure fuel flow and pressure	X	X				
10. Perform operational inspections of exhaust emission control system	X	X				
11. Perform operational inspections of evaporative emission control system	X	X				
12. Remove and replace fuel pump	X	X				
13. Repair or replace fuel lines and hoses	X	X				
14. Repair or service carburetors	X	X				
15. Service or repair manifold heat controls	X	X				
<b>VI. Maintaining and Repairing Cooling Systems</b>						
1. Check coolant freezing point		X				
2. Check coolant temperature		X				
3. Check overflow tank		X				
4. Chemically clean and flush cooling system		X				

## Automotive Mechanic

	S	T	I	S	E	C
5. Inspect, adjust or replace fan belts		X				
6. Perform chemical test on cooling system		X				
7. Pressure test cooling system		X				
8. Remove and replace radiators		X	X			
9. Replace core plugs (freeze plugs)		X				
10. Replace heater hoses		X				
11. Replace radiator hoses		X				
12. Replace variable speed fan		X				
13. Replace water pump		X				
VII. Maintaining and Repairing Standard and Power Steering Units						
1. Adjust worm and sector in steering gear		X				
2. Check manual steering gear fluid level		X				
3. Replace steering spindles		X				
4. Inspect steering gear		X				
5. Inspect steering linkage		X				
6. Lubricate steering gear and linkage		X				
7. Adjust or rebuild power steering units		X				
8. Check power steering fluid level		X				
9. Rebuild power steering units		X				
10. Repair power steering pumps		X				
11. Replace collapsible mast jackets (steering column)		X				
12. Repair tilt and telescoping steering wheel		X				
13. Replace manual steering gear components		X				
14. Replace power steering components		X				
15. Replace power steering pumps		X				

## Automotive Mechanic

	S	J	I	S	E	C
16. Replace belts and adjust tension		X				
17. Replace filter in power steering		X				
VIII. Maintaining and Repairing Braking Systems						
1. Arc grind brake shoes		X				
2. Adjust brakes		X				
3. Adjust parking brake linkage		X				
4. Adjust hand brake external band		X				
5. Bleed hydraulic brakes		X				
6. Free-up parking brake cables		X				
7. Inspect and replace brake pads (disc brakes)		X				
8. Inspect and turn rotor (disc brakes)		X				
9. Inspect and refinish brake drums		X				
10. Inspect and replace self-adjusters		X				
11. Perform operational brake inspection		X				
12. Recondition backing plates		X				
13. Reline brake shoes		X				
14. Repair disc brake calipers		X				
15. Repair master cylinder		X				
16. Rebuild brake power units		X				
17. Repair self-adjusters		X				
18. Repair wheel cylinder		X				
19. Replace brake hoses and lines		X				
20. Replace hydraulic lines and fittings		X				
21. Replace brake shoes		X				

## Automotive Mechanic

	S	T	S	H	C
22. Replace hydraulic control valves		X			
23. Replace hydraulic brake power units		X			
24. Replace hydraulic power cylinders		X			
25. Replace master cylinder		X			
26. Replace wheel cylinder		X			
27. Replace parking brake linkage		X			
28. Replace hand brake external band		X			
IX. Maintaining and Repairing Front Ends					
1. Adjust or replace torsion bars		X			
2. Adjust and repack front wheel bearings		X			
3. Adjust front wheel bearings/inspect wheel bearings		X			
4. Balance wheels and tires		X			
5. Check and align front end		X			
6. Inspect and replace steering damper		X			
7. Inspect and repair front suspension systems		X			
8. Lubricate ball joints		X			
9. Lubricate the front and rear suspension		X			
10. Perform visual inspections of the suspension systems		X			
11. Rebush king pins or link pins		X			
12. Repair rear suspension system		X			
13. Replace ball joints		X			
14. Replace front wheel bearing grease seal		X			
15. Replace front suspension control arms and bushings		X			
16. Replace rear suspension systems		X			
17. Replace shock absorbers and mounting		X			

## Automotive Mechanic

	S	J	I	S	E	C
X. Maintaining and Repairing Automobile Air Conditioners						
1. Diagnose air conditioning malfunctions		X				
2. Evacuate air conditioning system		X				
3. Inspect and recharge system with refrigerant		X				
4. Install air conditioners in vehicles		X				
5. Pressure test and leak test system		X				
6. Repair air conditioning compressor		X				
7. Repair automatic air conditioning and heating systems		X				
8. Repair electrical circuits		X				
9. Repair vacuum circuits		X				
10. Replace air conditioning compressor		X				
11. Replace condensor in air conditioning unit		X				
12. Replace compressor seals		X				
13. Replace air conditioner fan motor		X				
14. Replace evaporator in air conditioning unit		X				
15. Replace drier in air conditioning unit		X				
16. Replace expansion valve in air conditioning unit		X				
17. Replace evaporator control valve or diaphragm in air conditioning unit		X				
18. Service air conditioner control cables		X				
XI. Maintaining and Repairing Automobile Heaters						
1. Diagnose heating system malfunctions			X			
2. Replace defroster hose			X			
3. Replace heater control units			X			
4. Remove and replace heater core			X			
5. Repair heater core			X			
6. Service heater control components			X			

	Hrs.	Completed Courses		Total Completed
		Transfer Hours	LLC Hours	
<u>Communications Skills:</u>				
Communications I or Composition I (42.050 or 42.120)	4	_____	_____	_____
Public Speaking (94.131)	4	_____	_____	_____
<u>Mathematics/Science:</u>				
Math. (62.122 or above) or Life Science (56.100 or above or Physical Science (84.100 or above)	4	_____	_____	_____
<u>Social Science:</u>				
Human Relations (90.050) Elective (---.040 or above)	8	_____	_____	_____
<u>Health:</u>				
Health/P.E.	4	_____	_____	_____
				<u>24 h</u>
<u>Co-op:</u>				
Field Experience I 30.050	5	_____	_____	_____
Seminar I 30.051	1	_____	_____	_____
Field Experience II 30.052	5	_____	_____	_____
Seminar II 30.053	1	_____	_____	_____
Field Experience III 30.054	5	_____	_____	_____
Seminar III 30.055	1	_____	_____	_____
Field Experience IV 30.076	5	_____	_____	_____
Seminar IV 30.077	1	_____	_____	_____
Field Experience V 30.078	5	_____	_____	_____
Seminar V 30.079	1	_____	_____	_____
Field Experience VI 30.080	5	_____	_____	_____
Seminar VI 30.081	1	_____	_____	_____
				<u>36 h</u>
<u>Electives - (Auto Mechanic)</u>				
95.045 Applied Shop Computations	4	_____	_____	_____
95.049 Basic Technical Science	4	_____	_____	_____
20.050 Automotive Engines	8	_____	_____	_____
20.054 Automotive Electricity & Fuel	8	_____	_____	_____
20.080 Automotive Diagnostic Techniques	8	_____	_____	_____
20.077 Power Option	4	_____	_____	_____
20.085 Automotive Air Conditioning	4	_____	_____	_____
20.076 Automotive Standard Transmissions	4	_____	_____	_____
20.078 Automotive Automatic Transmissions	8	_____	_____	_____
20.052 Automotive Brakes & Chassis	8	_____	_____	_____
20.051 Automotive Machine Shop	6	_____	_____	_____

36 hTotal: 96 h

96 hrs. - Associate in Applied Science

AUTO MECHANIC

6 qtr. Course Schedule

1st		2nd	
Field Exp. I	5	Field Exp. II	5
Seminar I	1	Seminar II	1
Applied Shop Computations	4	Basic Tech. Science	4
Automotive Engines	<u>8</u>	Auto Elec. & Fuel	<u>8</u>
	18		18
3rd		4th	
Field Exp. III	5	Field Exp. IV	5
Seminar III	1	Seminar IV	1
*Math/Science	4	*Health/P.E.	4
Auto Diagnostic Techniques	8	Elec. Auto Mach, Shop	4
	<u>—</u>		14
	18		
5th		6th	
Field Exp. V	5	Field Exp. VI	5
Seminar V	1	Seminar VI	1
*Sco Sci (elec)	4	*Public Speaking	4
*Comm I/Comp I	<u>4</u>	*Sco Sci (elec)	<u>4</u>
	14		14

24 Hours general ed. \*

36 Hours co-op field exp. & seminar

36 Hours related electives

\*College Transfer

36 hours

## Electives

## Course Descriptions - Auto Mechanic

95.045	Applied Shop Computations	4 hours
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This course focuses on basic arithmetic and calculations involving geometric figures and angles necessary for solving routine shop oriented problems as well as the preparation and use of charts and graphs.

95.049	Basic Technical Science (Lab. fee \$3.00)	4 hours
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This course provides students with an understanding of the basic principles relating to the properties of matter, mechanics, heat and electricity, and their relationships to automotive and machine shop applications.

20.050	Automotive Engines (lab fee \$5.00)	8 hours
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This course covers the fundamentals of automotive type engines. Emphasis is placed upon components that make up the engine and the function in its operation. Experience is gained through the disassembly of the automobile engine. The proper use of tools and safe working procedures are stressed.

(Prerequisite: concurrent registration in 95.045 above)

20.054 Automotive Electricity and Fuel (lab fee \$5.00) 8 hours

This course covers the electrical system, including ignition, carburetion and companion equipment and the theory of operation of all units of these systems, plus accessory electrical equipment. Experience provided in the practical operation of units in these systems and analysis of trouble by means of instruments, dissassembly, repair and adjustment of the various units.

(Prerequisite: concurrent registration in 95.049 above)



20.080 Automotive Diagnostic Techniques (lab fee \$5.00) 8 hours

This course focuses on a study of a practical experience in the use of diagnostic equipment. The interpretation of readings of these instruments is studied in relation to the repair of the various units and systems of the automobile.

(Prerequisite: 20.054)

20.077 Power Option 4 hours

This course is to provide the student with a systematic method of diagnosing and repairing of the power accessories and optional equipment such as: windshield wipers and motor, electric door lock, cruise control and many others.

(Prerequisite: 20.080)

20.085 Automotive Air Conditioning (lab fee \$3.00) 4 hours

This course focuses on a study of the operating fundamentals of automotive type air conditioning used on current automobiles and trucks. Practical experience will be gained in trouble shooting, repairing and servicing the various types of units as well as the various components including compressors, evaporators, condensers, and controls.

20.076 Automotive Standard Transmissions 4 hours

This course focuses on the theory of operation of clutches, standard transmissions, propeller shafts, differentials, and rear axles. Experience in the disassembly inspection, repairing, and adjusting of the various makes and models of the drive train units.

Prerequisite: 20.080

20.078 Automotive Automatic Transmissions (lab fee \$5.00) 8 hours

This course focuses on the theory of operation of the various kinds of automatic transmissions. A study of the operation of central valve mechanisms, torque converters, clutch and brake control. Experience in the disassembly, inspection, repairing

20.078 (cont'd.)

and testing of the automatic transmission.

Prerequisite: 20.076

20.052     Automotive Brakes and Chassis (lab fee \$5)     8 hours

This course is designed to familiarize the student with the various braking systems of the modern automobile with emphasis on frontend geometry and steering mechanisms. Experience is achieved in testing, analyzing, and repairing the braking, front-end, and steering mechanisms.

Prerequisite: 20.078

20.051     Automotive Machine Shop (lab fee \$3.00)     6 hours

This course is to familiarize the student in the operation and care of precision engine rebuilding equipment such as: valve grinders, boring bars, pin hone, and many other specialized machines.

Prerequisite: 20.080

Library Resources

Auto Engine Tuneup TL 152 .R565

Auto Engines and Electrical Systems TL 210 .B52

Auto Engines of Tomorrow TL 210 .D33

Auto Enthusiast Directory TL 152 .H93

Auto Mechanics Fundamentals TL 146 .58

Chilton's Auto Repair Manual TL 152 .C5226

Auto Repairs for Dummies TL 152 .S42

Auto Service & Repair TL 152 .S7745

Automechanics TL 152 .E398

Automobile Accessories Repair Guide TL 275 .M4

Automobile Brakes and Braking Systems TL 260 .N4

Automobile Electronics Servicing Guide TL 272 .C3

Emissions from Combustion Engines TD 886.5 .P38

Engine Emissions TD 886.5 .S68

General Repair Tools for Automobile Mechanics TL 151 .G4

Automobile Mechanics Refresher Course (Cassette) TL 152 .A9865

Automobile Power Accessories TL 275 .G53

Automotive Mechanics TL 205 .C86

Imported Car Mechanical Manual TL 151 .I4

Air Cooled Automotive Engines TL 210 .M34

Basic Chassis, Suspension & Brakes TL 255 .B35

Automotive Brakes and Power Transmission Systems TL 260 .F7

Alternatives to the Internal Combustion Engine TL 210 .A96  
Automotive Electrical Systems TL 272 .B54  
Automotive Chassis and Accessory Circuits TL 272 .B623  
Automotive Electrical Systems TL 272 .E639  
Motors' Vacuum & Wiring Diagrams TL 272 .F67X  
Chilton's Foreign Car Repair Manual TL 152 .C5227  
The Gas Turbine Engine TL 227 .N67  
Automotive Guide TL 151 .B77  
Ignition Systems TL 272 .L37  
Basic Automotive Measuring Tools & How To Use Them TJ 1313 .B34  
Ford Car Shop Manual TL 208 .F673  
Automotive Maintenance & Trouble Shooting TL 152 .G577  
Complete Guide for Easy Car Care TL 152 .L492  
Peterson's Basic Auto Repair Manual TL 152 .P4  
Automotive Fundamentals TL 152 .V4  
Basic Cams, Valves & Exhaust Systems TL 210 .B37  
Motor's Mechanical Time & Parts Guide TL 151 .F67  
The Automotive Engine TL 210 .N86  
Questions & Answers On Automobile Engines TL 210 .U58  
Automotive Engines: Maintenance & Repair TL 210 .B48  
Automotive Systems: Fuel, Lubrication & Cooling TL 210 .E37  
Automotive Emission Control & Tuneup Procedures TL 210 .I36  
Automotive Tune-up & Test Equipment TL 210 .C3  
Automotive Diagnosis & Tune-up TL 208 .J6

### Auto Mechanics-Magazines

Autocar

Automobile Quarterly

\*Car and Driver

Car Craft

Hot Rod Magazine

\*Motor Trend

\*Road and Track

Automotive Engineering

\*Automotive Industries

\*Motor

\*Available in Lake Land College Library

### Career Center

Aim for a Job in Automotive Service

Your Future in Automotive Service

APPENDIX D  
Electrician Curriculum Materials

## TASK ANALYSIS

### ELECTRICIAN

- I. Identifies Basic Safety Measures and Electrical Codes
- II. Lays Out Electrical Wiring
- III. Installs Rough Wiring
- IV. Hooks Up Wiring
- V. Installs Special Purpose Receptacles and Wiring
- VI. Installs Power Distribution Systems
- VII. Performs Preventive Maintenance

TRAINING PLAN  
ELECTRICIAN

	School	Job	Independent Study	Evaluation	Comment
Identifying Basic Safety Measures and Electrical Codes					
1. Identify first aid equipment and associate with proper usage	X	X	X		
2. Identify basic safety hazards		X			
3. Identify basic safety practices	X	X			
4. Identify basic safety rules and regulations in the industry	X	X			
5. Identify OSHA requirements for local industry	X		X		
6. Identify safety practices and equipment to be used when the voltage exceeds 500 volts	X	X			
7. Identify consumer product safety guidelines	X		X		
Laying Out Electrical Wiring					
1. Identify electrical drafting symbols	X				
2. Identify convenience outlets	X				
3. Identify split wired convenience outlets	X				
4. Identify special purpose outlets/appliance symbols	X				
5. Identify low voltage signal systems	X				
6. Identify riser diagram	X				
7. Identify room sizes and location	X				
8. Identify stairways	X				
9. Identify openings such as windows and doors	X				
10. Interpret specifications	X				
11. Prepare wiring diagram for residential use	X				
12. Select wire sizes	X	X			
13. Calculate fuse size	X				



## ELECTRICIAN

	S	J	I	S	E	C
14. Calculate circuit loads	X		X			
15. Plan tools required for job completion	X	X				
16. Plan equipment required for job completion		X				
17. Plan materials required for job completion		X				
18. Perform improvement modification on existing plan	X	X				
19. Estimate time and material cost factors	X	X				
Installing Rough Wiring						
1. Locate proper position for installation		X				
2. Mount outlet boxes		X				
3. Mount switch boxes		X				
4. Install junction boxes and fittings		X				
5. Locate and mount lighting fixture boxes		X				
6. Install cabinet and cutout boxes		X				
7. Bore holes for wire runs		X				
8. Run Romex wire		X				
9. Run BX wire		X				
10. Run conduit wire		X				
Hooking Up Wiring						
1. Connect convenience outlets		X				
2. Connect single pole-single throw switch		X				
3. Connect three-way switch		X				
4. Connect four-way switch		X				
5. Connect lighting fixtures		X				
6. Splice wires using solderless connector and lugs		X				

## ELECTRICIAN

	S	U	I	S	E	C
Installing Special Purpose Receptacles and Wiring						
1. Install range receptacle		X				
2. Install floor receptacle		X				
3. Install wall receptacle		X				
4. Install appliance receptacle		X				
5. Perform basic wiring on electrical, gas and oil fired heating units and controls		X				
6. Connect air conditioning apparatus		X				
7. Operate refrigeration control circuits		X				
8. Develop basic security system plans		X	X			
9. Analyze audio system requirements for public address systems		X	X			
10. Place outdoor and special effects lighting fixtures and controls		X				
Installing Power Distribution Systems						
1. Install service head on building		X				
2. Mount meter base on building		X				
3. Mount distribution cabinet for two wire system		X				
4. Mount distribution cabinet for three wire system		X				
5. Install service breaker or switch		X				
6. Install grounds		X				
7. Install branch circuit power panels		X				

## ELECTRICIAN

	S	J	I S	E	C
Performing Preventive Maintenance					
1. Maintain records of equipment running time	X	X	X		
2. Maintain records on frequency of repair data for electrical units		X			
3. Clean controls and exposed units of foreign matter		X	X		
4. Recommend specific safety procedures	X	X	X		
5. Make mathematical computations for current carrying capacities	X	X	X		
6. Use common hand tools and power tools to keep equipment in good working order		X			

		Hrs.	Completed Courses		Total Completed
			Transfer Hours	LLC Hours	
<u>Communications Skills:</u>					
Communications I or Composition I (42.000 or 42.120)		4	_____	_____	_____
Public Speaking (94.131)		4	_____	_____	_____
<u>Mathematics/Science:</u>					
Math. (62.122 or above) or Life Science (56.100 or above or Physical Science (84.100 or above)		4	_____	_____	_____
<u>Social Science:</u>					
Human Relations (90.050) Elective (---.040 or above)		8	_____	_____	_____
<u>Health:</u>					
Health/P.E.		4	_____	_____	_____
					24 h
<u>Co-op:</u>					
Field Experience I	30.050	5	_____	_____	_____
Seminar I	30.051	1	_____	_____	_____
Field Experience II	30.052	5	_____	_____	_____
Seminar II	30.053	1	_____	_____	_____
Field Experience III	30.054	5	_____	_____	_____
Seminar III	30.055	1	_____	_____	_____
Field Experience IV	30.076	5	_____	_____	_____
Seminar IV	30.077	1	_____	_____	_____
Field Experience V	30.078	5	_____	_____	_____
Seminar V	30.079	1	_____	_____	_____
Field Experience VI	30.080	5	_____	_____	_____
Seminar VI	30.081	1	_____	_____	_____
					36 h
<u>Electives (Electrical)</u>					
Blueprint Reading for Construction	35.040	4			
Technical Drafting	35.050	4			
Architectural Drafting I	35.051	4			
Electrical Drafting	35.083	4			
Intro to Electronics	39.040	4			
Practical Electricity	39.067	2.5			
Practical Electrical Wiring	39.068	2			
Basic Electrical Maintenance	52.049	4			
Electrical Installation Procedures	52.050	4			
Drives and Motors	52.047	4			
Small Business Management	23.084	4			
Intro to Business	23.142	4			

36 hTotal 96 h

## 96 hrs. - Associate in Applied Science

ELECTRICAL

## 6 qtr. Course Schedule

1st qtr. (fall)		2nd qtr. (winter)	
Co-op Field Exp. I	5	Co-op Field Exp. II	5
Co-op Seminar I	1	Co-op Seminar II	1
*Comm. I/Comp. I	4	*Sco. Sci Elec.	4
*Health/P.E.	2	*Health/P.E.	2
Technical Drafting	4	Arch. Drafting I	4
	<u>16</u>		<u>16</u>
3rd qtr. (spring)		4th qtr. (fall)	
Co-op Field Exp. III	5	Co-op Field Exp. IV	5
Co-op Seminar III	1	Co-op Seminar IV	1
*Math/Science	4	Intro to Electronics	4
Electrical Drafting	4	Elective	4
Elective	4		<u>14</u>
	<u>18</u>		
5th qtr. (winter)		6th qtr. (spring)	
Co-op Field Exp. V	5	Co-op Field Exp. VI	1
Co-op Seminar V	1	Co-op Seminar	1
*Sco. Sci (Elec.)	4	Elec. Install. Proc.	4
*Public Speaking	4	Drives & Motors	4
Basic Elec. Maintenance	4		<u>14</u>
	<u>18</u>		

24 hours general ed. \*

36 hours Co-op field exp. & seminar

36 hours related electives

Electives

Course Descriptions - Electrical		36 hours
35.040	<u>Blueprint Reading for Construction</u>	4 hours
	<p>This course focuses on construction communications pertaining to architectural working drawings and shop drawings. Emphasis is placed on the interpretation of drawings and specifications from actual working drawings involving all types of commercial buildings.</p>	
35.050	<u>Technical Drafting</u>	4 hours
(fall)	<p>This course is an introductory overview of general drafting. Emphasis is placed on freehand sketching, instrument drawing, orthographic views, sectioning, dimensioning, and general blueprint reading.</p>	
35.051	<u>Architectural Drafting I</u>	4 hours
(winter)	<p>This course focuses on the basic fundamentals of architectural drawing. Emphasis is placed on drafting techniques, lettering, methods of showing plans, elevations, sections, dimensions, and elementary architectural detailing.</p> <p>(Prerequisite: Technical Drafting 35.050 or equivalent.)</p>	
35.083	<u>Electrical Drafting</u>	4 hours
	<p>This course focuses on electrical sources, materials and distribution for architectural and building construction technology. Emphasis is placed on electrical codes, layout of electrical requirements, estimating electrical requirements, reading and understanding of electrical working drawings for various architectural and building construction</p>	

- 39.040      Introduction to Electronics      4 hours
- (fall)      This is a laboratory oriented course designed to generate within the student an appreciation of and interest in electronics. The student is given the opportunity to observe electronic circuits in operation and waveforms associated with them as well as how they are used to form systems. The student becomes familiar with professional electronics test instruments.
- 39.067      Practical Electricity      2.5 hours
- (night extension centers)      An introduction to the principles of electricity that apply to electrical wiring. Included are the concepts of voltage, current, resistance, and electrical power. This course is required as a prerequisite to 39.070.
- 39.068      Practical Electrical Wiring      2 hours
- (night extension centers)      This course presents the wiring practices for residential, farm and light industrial buildings in compliance with the National Electric Code.  
(Prerequisite: 39.067 or concurrent enrollment.)
- 52.049      Basic Electrical Maintenance      4 hours
- (winter)      This is a combined lecture/lab course providing the student with basic electrical theory and hands on experience using a variety of basic test equipment.
- 52.050      Electrical Installations Procedures      4 hours
- (spring)      This course focuses on the methods and methods of materials used in electrical installation, and the problems encountered in electrical construction work. The National Electrical Code is used as the basic guide to all procedures and materials.

52.047      Drives and Motors      4 hours

(spring)      This course is designed to give the beginning mechanic those skills and the knowledge necessary to install and repair electric motors and drives either in combination or as separate operational items.

23.084      Small Business Management      4 hours

(winter)      This course attempts to isolate and provide solutions to problems encountered by individuals who desire to own and/or manage a small business enterprise. Content includes: areas of opportunity and the outlook for small business operations, self analysis of the potential small business manager, success and failure patterns, capital needs and capital sources, organizing, directing, and controlling the small business, financial management, locations, facilities, personnel relations, advertising, pricing, consumer credit, and inventory control.

23.142\*      Introduction to Business      4 hours

This course covers the function, objectives, organization, and role of business in a free-enterprise system. The course is designed to provide an over-view of the field of business for the student as a consumer and/or to provide a framework into which specialized fields of study may be viewed in perspective to the total field of business.

\*College Transfer



Library Resources Books

## Electrician

Electrical Measurements & Instrumentation TK 275 .B34  
preventive Maintenance of Electrical Equipment TK 453 .H8  
Handbook of Wiring, etc. TK 3211 .H35  
Electric Capacity - Programmed Instruction ZC 589 .K25  
Electric Circuit Fundamentals TK 454 .L87  
Detector & Rectifier Circuits TK 7870 .A3  
Direct & Alternating Currents TK 3226 .06  
Wiring Circuits TK 3101 .P55  
RCA Power Circuits TK 3091 .R3X  
AC Circuits ZC 601 .A67  
Electric Circuits & Machines TK 146 .L54  
Electric Motor Controls & Circuits TK 2851 .F8  
Electrical Control Systems in Industry TK 2851 .S58  
Power Diode & Thyistor Circuits TK 7871.99 .T5 D3  
ABC's of Silicon Controlled Rectifiers TK 2798 .L9  
Alternating Current QC 641. .A4X  
Electrical & Electronics Drawing TK 431 .B3  
Electrical Drafting & Design TK 431 .S57  
Industrial Electricity TK 146 .D353 V.2  
Introduction to Electrical Design TK 146 .H243  
How to Read Electrical Blueprints TK 153 .H4  
Principles of Applied Electricity TK 146 .H873

practical Electricity TK 146 .M513

ABC's of Electricity TK 146 .S16

The Practical Dictionary of Electricity & Electronics TK 9 .14

Electrical Estimating TK 435 .A8

American Electrician's Handbook TK 151 .A47

NFPA Handbook of the National Electrical Code TK 260 .N2

Fundamental Jobs in Electricity TK 147 .P39

Basic Math for Electricity & Electronics TK 168 .S43

National Electrical Safety Code TK 152 .N34

Direct Current Transmission TK 3111 .K5

Efficient Electricity Use TJ 163.3 .E3

Electrical Wiring TK 3201 .H47

House Wiring TK 3285 .P34

The Complete Home Electrical Wiring Handbook TK 9901 .A29

Wiring Diagrams for Light & Powers TK 3205 .A5

National Electrical Code & Blueprint Reading TK 3205 .G75

The National Electrical Code Handbook TK 260 .N28

Interior Electric Wiring TK 3271 .G65

Practical Electrical Wiring TK 3271 .R48

Advanced Wiring (Time Life) TK 3285 .T55

Circuit Problems & Solutions TK 3226 .L5

Electrical Identification Kit TK 168 .I5

Electricity (careers) TK 148 .E38

Basic Electricity ZC 523 .B8

Basic Electricity Theory & Practice ZC 523 .K38

Principles of Electricity ZC 518 .P32

Questions & Answers for Electrician Exams TK 7860 .P2

Electricity ZC 532 .E6

Teach Yourself Electricity ZC 530 .W5

## ELECTRICITY - MAGAZINES

Electric Power Research (EPRI) Journal

Bell System Technical Journal

Electronics & Power

\*Electronic News

\*Electronic Servicing Magazine

\*Electronics

\*Popular Electronics

\*Elementary Electronics

\*Available at Lake Land College

Career Guidance Center  
Electrician

Electricians, Construction - Occupational brief

Electrician, Maintenance - Career brief

APPENDIX E  
Fashion Merchandising Curriculum Materials

## TASK ANALYSIS

### FASHION MERCHANDISING (APPAREL & ACCESSORIES)

- I. Interprets Store Layout, Facilities & Services to Customers
- II. Sells Merchandise
- III. Buys Merchandise
- IV. Advertises and Displays Merchandise
- V. Interprets Merchandise Information
- VI. Performs Related Duties

TRAINING PLAN  
FASHION MERCHANDISING (APPAREL AND ACCESSORIES)

	School	Job Independent Study	Evaluation	Comment
I. Interpreting Store Layout, Facilities and Services to Customers				
1. Explain store policies to customers		X		
2. Respond to customer inquiries		X		
3. Identify location of customer facilities		X		
4. Identify location of merchandise in the store		X		
5. Inform customers by signs for self-selection		X		
6. Arrange merchandise in relation to floor space		X		
7. Identify services of the store which are free and those for which there is a charge		X		
8. Identify safety laws and rules	X	X		
9. Discard boxes, wrappings, etc.		X		
10. Keep merchandise and sales floor orderly and neat		X		
11. Fill out necessary forms when accidents occur	X	X		
II. Selling Merchandise				
1. Explain procedure for credit card application	X	X		
2. Interpret credit policies to customers		X		
3. Read tax computation charts	X	X		
4. Operate the cash register		X		
5. Identify cash register errors and correct them		X		
6. Conduct a cash sale transaction		X		
7. Conduct a charge sale (credit card) transaction		X		
8. Inform customer of location of advertised merchandise		X		
9. Approve and accept checks		X		
10. Prepare merchandise for lay-away		X		
11. Explain Layaway policy to customer		X		

## FASHION MERCHANDISING (APPAREL AND ACCESSORIES)

	S	J	I	S	E	C
11. Fill out and accept gift certificates		X				
12. Analyze customer needs		X				
13. Demonstrate merchandise to customer		X				
14. Suggest a substitute for unavailable merchandise		X				
15. Suggest related items to customers		X				
16. Point out hidden value of merchandise		X				
17. Respond to customer complaints and returned merchandise		X				
18. Take mail and telephone orders		X				
19. Close out department at end of day		X				
20. Record and report federal and state sales tax	X	X				
21. Close out the cash register		X				
22. Report daily sales in department		X				
23. Store merchandise according to store system		X				
24. Route merchandise from receiving dock to designated department		X				
25. File claims for merchandise damages, shortages, overcharges and substitutes		X				
26. Operate price-making machine		X				
27. Put price tickets on merchandise		X				
28. Determine priority for processing merchandise		X				
29. Prepare merchandise for the sales floor		X				
30. Record information on forms and reports necessary for inventory control	X	X				
31. Replenish floor stock from reserve		X				
32. Remark merchandise for special/sales events		X				
33. Count and record stock		X				
34. Prepare and ship warranty items approved for return		X				



## FASHION MERCHANDISING (APPAREL AND ACCESSORIES)

	S	S	H	S	E	C
III. Buying Merchandise						
1. Identify typical discounts and terms of manufacturers	X	X				
2. Interpret current trends in merchandising		X				
3. Utilize store's procedure for mark-ups	X	X				
4. Identify competitive stores in the area		X				
5. Determine quantity of merchandise to buy		X				
6. Fill out company order form	X	X				
7. Observe company's restrictions, policies and procedures for buying		X				
8. Stay within projected budget	X	X				
9. Anticipate and buy related items	X	X				
10. Take advantage of seasonal price changes	X	X				
11. Make decisions on styles, colors, sizes, delivery dates, etc.		X				
12. Develop files on suppliers and their stock		X				
13. Analyze and interpret past sales records	X	X				
14. Place reorders promptly		X				
15. Identify various modes of transportation used in shipping merchandise	X	X				
16. Conduct physical inventory	X	X				
17. Identify the difference between cost method and retail method of inventory	X	X				
18. Place special orders of merchandise for customers		X				
19. Read and interpret profit and loss statement	X	X				

## FASHION MERCHANDISING (APPAREL AND ACCESSORIES)

	S	J	I	S	E	C
IV. Advertising and Displaying Merchandise						
1. Study past ads for help in planning	X	X				
2. Select merchandise for advertising		X				
3. Utilize brand names		X				
4. Evaluate the supply of merchandise to back up the ad		X				
5. Evaluate the effectiveness and cost of various advertising media	X	X				
6. Check advertising proofs for accuracy	X	X				
7. Write copy for ads	X	X				
8. Coordinate national or chain advertising with your store		X				
9. Coordinate advertising with displays		X				
10. Plan and schedule displays and display theme	X	X				
11. Employ seasonal or storewide themes	X	X				
12. Utilize various types of display fixtures		X				
13. Prepare merchandise for display		X				
14. Dress mannequins for display		X				
15. Assemble temporary displays		X				
16. Use various lighting techniques		X				
17. Compile current fashions for display		X				
18. Change display often		X				
19. Keep display area neat and clean		X				
20. Store display fixtures for future use		X				
21. Keep personnel informed of sales promotion activities		X				

## FASHION MERCHANDISING (APPAREL AND ACCESSORIES)

	S	I	I	S	I	C
V. Interpreting Merchandise Information						
1. Identify federal laws and regulations as they apply to fabrics	X	X	X			
2. Identify the various agencies that give protection to the customer		X	X			
3. Apply Federal Trade Commission protective measures	X	X				
4. Interpret social and economic influences on fashion		X				
5. Assist customer in selections suitable to their age, figure type and personality		X				
6. Aid customer in coordinating apparel		X				
7. Convey fabric qualities in layman's language		X				
8. Translate merchandise label information		X				
9. Relate garment care to fabric content		X				
10. Explain care procedures for non-textile products		X				
11. Identify good construction qualities		X				
12. Identify different size range of products		X				
13. Read manufacturer's supplied information		X	X			
14. Review trade and business journals for product knowledge		X	X			
VI. Performing Related Duties						
1. Arrange for alterations		X				
2. Analyze fitting problem of customer		X				
3. Pin garments for alterations		X				
4. Plan fashion show program		X				

## FASHION MERCHANDISING (APPAREL AND ACCESSORIES)

	S	P	S	E	C
5. Help models select garments		X			
6. Alter and prepare garments for fashion show		X			
7. Help models dress		X			
8. Return garments to proper place		X			

	Hrs.	Completed Courses		Total Completed
		Transfer Hours	LLC Hours	
<u>Communications Skills:</u>				
Communications I or Composition I (42.050 or 42.120)	4	_____	_____	_____
Public Speaking (94.131)	4	_____	_____	_____
<u>Mathematics/Science:</u>				
Math. (62.122 or above) or Life Science (56.100 or above or Physical Science (84.100 or above)	4	_____	_____	_____
<u>Social Science:</u>				
Human Relations (90.050)	8	_____	_____	_____
Elective (---.040 or above)				
<u>Health:</u>				
Health/P.E.	4	_____	_____	_____
				<u>24</u>
<u>Co-op:</u>				
Field Experience I 30.050	5	_____	_____	_____
Seminar I 30.051	1	_____	_____	_____
Field Experience II 30.052	5	_____	_____	_____
Seminar II 30.053	1	_____	_____	_____
Field Experience III 30.054	5	_____	_____	_____
Seminar III 30.055	1	_____	_____	_____
Field Experience IV 30.076	5	_____	_____	_____
Seminar IV 30.077	1	_____	_____	_____
Field Experience V 30.078	5	_____	_____	_____
Seminar V 30.079	1	_____	_____	_____
Field Experience VI 30.080	5	_____	_____	_____
Seminar VI 30.081	1	_____	_____	_____
				<u>36</u>
<u>Activities - Fashion Merchandising</u>				
Understanding Art 17.250	4	_____	_____	_____
Sign I 17.110	4	_____	_____	_____
Sign II 17.111	4	_____	_____	_____
Principles of Sales- manship 23.058	4	_____	_____	_____
Principles of Retailing 23.086	4	_____	_____	_____
Principles of Adver- tising 23.087	4	_____	_____	_____
Business Math. 23.140	4	_____	_____	_____
Principles of Marketing 23.247	4	_____	_____	_____
Management Fundamentals 23.251	4	_____	_____	_____
Small Business Manage- ment 23.084	4	_____	_____	_____
Introduction to Bus. 23.142	4	_____	_____	_____
				<u>36</u>
Total				<u>96</u>

## 96 hrs. - Associate in Applied Science

FASHION MERCHANDISING

## 6 qtr. Course Schedule

1st (fall)		2nd (winter)	
Field Exp. I	5	Field Exp. II	5
Seminar I	1	*Seminar II	1
*Comm. I/Comp. I	4	*Human Rel.	4
Understanding Art	4	Health P.E.	4
	<u>14</u>	Design I	<u>4</u>
			18
3rd (spring)		*4th (summer)	
Field Exp. III	5	Field Exp. IV	5
Seminar III	1	Seminar IV	1
*Math/Science	4	Principles of Sales-	4
Principles of Adv.	4	manship	
Business Math	4	Principles of Retail-	4
	<u>18</u>	ing	<u>4</u>
			14
5th (fall)		6th (winter)	
Field Exp. V	5	Field Exp. VI	5
Seminar V	1	Seminar VI	1
*Sco Sci (Elec.)	4	Elective	4
*Public Speaking	4	Elective	<u>4</u>
Principles of Market-	4		14
ing	<u>18</u>		

\*You may also begin with this summer qtr. schedule.

24 Hours general ed.\*

36 Hours co-op field exp. & seminar

36 Hours related electives

### Electives

#### Course Descriptions - Fashion Merchandising

17.250\*      Understanding Art      4 hours

This course is designed to develop an appreciation of the visual arts and their relationships to man and his environment.

17.110\*      Design I      4 hours

(winter)

This course covers the elements and principles of design emphasizing two dimensional organizations of forms based on discussion and studio problems.

(Credit is not granted to students who received credit in 17.140.)

17.111\*      Design II      4 hours

(spring  
if  
offered)

This course focuses on continued study of elements and principles of design with emphasis on three-dimensional organization of form with various media.

23.058      Principles of Salesmanship      4 hours

(summer)

This course covers various phases of salesmanship such as buying habits of the customer, buying motives, the pre-approach, presentation and demonstration, handling objections, closing the sale, suggestion, and sale follow-up.

23.086      Principles of Retailing      4 hours

(summer)

This course is designed for (1) those who own or plan to become owners of a retail store, (2) those who are involved or plan to become involved in the management function of a retail store and/or (3) those who desire a general knowledge of retailing as an institution. Content includes: Opportunities and careers in the field of retailing, planning the store location, facilities and layout, sale promotion, customer services, retail

financial management and control, and buying, receiving, pricing, and storing as elements of effective merchandise management.

23.087      Principles of Advertising      4 hours

(spring)      This course provides a comprehensive survey of the whole field of advertising to show the relationship of advertising to history and economics. The course covers such topics as how to write advertising, how to display advertising, where to publish advertising, sales promotion, creative development of advertising, media selection, and the administration problems involved in advertising.

(summer)

23.140\*      Business Math      4 hours

This course covers basic applications of mathematics in the business world-percentages, elementary algebra, interest, installment buying, statistics, insurance, and the like. It is designed to reinforce and expand social and business concepts held by the student through the use of mathematics. This course is taught largely on an independent basis.

23.247\*      Principles of Marketing      4 hours

This course serves as an introduction to the field of marketing. Content includes: the identification, nature and structure of target markets; the controllable variables in the marketing mix which include product lines, channels of distribution, pricing policies, advertising promotion; and the uncontrollable variables which include legal environment, economic environment, resources and objectives of the firm, cultural environment, and the existing business structure.

23.251\*      Management Fundamentals      4 hours

This course serves as an introduction to the field of management. Content includes: organizational structure, policies and objectives, leadership techniques, management teamwork, communications, delegation of



authority, methods improvement, job design, rules and disciplinary policies, motivation and morale, employee recruitment and selection procedures, training and orientation, and employee evaluation.

23.084      Small Business Management      4 hours

(winter)      This course attempts to isolate and provide solutions to problems encountered by individuals who desire to own and/or manage a small business enterprise. Content includes: area of opportunity and the outlook for small business operations, self analysis of the potential small business manager, success and failure patterns, capital needs and capital sources, organizing, directing, and controlling the small business, financial management, locations, facilities, personnel relations, advertising, pricing, consumer credit and inventory control.

23.142\*      Introduction to Business      4 hours

This course covers the function, objectives, organization, and role of business in a free-enterprise system. The course is designed to provide an over-view of the field of business for the student as a consumer and/or to provide a framework into which specialized fields of study may be viewed in perspective to the total field of business.

\*College Transfer

## Library Resources

## Fashion Merchandising

Clothing; A Study in Human Behavior GT 521 .R9  
 Sales Horizons HF 5438 .H135  
 Effective Selling Through Psychology HF 5438 .B89  
 Marketing: A Contemporary Analysis HF 5415 .M296  
 Readings in Advertising & Promotion Strategy HF 5823 .B258  
 The Successful Promoter HF 5823 .S364  
 Salesmanship Fundamentals HF 5438 .E69  
 Salesmanship; Helping Prospects Buy HF 5438 .K433  
 Salesmanship; The Personal Force in Marketing HF 5438 .C764  
 Salesmanship; Practices & Problems HF 5438 .C33  
 The Successful Salesman HF 5438 .G865  
 You Can Become A Super Salesman HF 5438 .K424  
 Money Unlimited for Retail Salesmen HF 5438 .R733  
 Fundamentals of Selling HF 5438 .W616  
 Saleswoman HF 5439.5 .P58 (Career Center)  
 The Permissible Lie; The Inside Truth About Advertising HF 5813 U6 .B3  
 Readings in Advertising & Promotion Strategy HF 5823 .B258  
 Tested Advertising Methods HF 5823 .C18  
 Advertising HF 5823 .C7  
 Retail Advertising & Sales Promotion HF 5823 .E275  
 Advertising: Creative Communication with Consumers HF 5823 .H36  
 Advertising: Mass Communication in Marketing HF 5823 .K39

Marketing, Sales Promotion, & Advertising HF 5823 .N6  
How to Advertise HF 5823 .R665  
Fundamentals of Advertising HF 5823 .R7  
The Economics of Advertising HF 5821 .S413  
How to Advertise & Promote Your Small Business HF 5823 .S535  
Truth in Advertising & Other Heresies HF 5821 .W4  
Boutique Attire TT 515 .T55  
Polyester Fibres TS 1549 .A1 L813  
Novel Materials TT 515 .T55  
Service Imperative TS 1315 .C76  
Textiles TS 1446 .H 62

### Fashion Merchandising Magazines

Business Today

\*Business Week

\*Fortune

Journal of Advertising

Journal of Advertising Research

Madison Avenue

\*Sales & Marketing Management

Visual Merchandising

\*Mademoiselle

\*Seventeen

\*Vogue

Women's Wear Daily

APPENDIX F  
Floriculture Curriculum Materials

## FLORICULTURE WORKER

## Task Analysis

- I. Prepares soils and plant media
- II. Plants seeds, bulbs, and cuttings
- III. Controls and regulates plant environment
- IV. Implements irrigation practices
- V. Applies pest and disease control substances
- VI. Harvests crops
- VII. Packs, stores, and ships plants
- VIII. Maintains and repairs tools and equipment

TRAINING PLANFloriculture Worker

	School	Job	Independent Study	Evaluation	Comment
I. Preparation of Soils and Planting Media					
1. Take soil samples	X				
2. Analyze soil samples to determine pH levels	X				
3. Analyze soil samples to determine soluble salts content	X				
4. Shred planting media	X	X			
5. Screen planting media	X	X			
6. Mix media materials	X	X			
7. Pasteurize prepared media with steam	X	X			
8. Pasteurize media with chemicals	X	X			
9. Sterilize (pasteurize) soils	X	X			
10. Mix fertilizers into media	X	X			
11. Construct open drainage ditches		X	X		
12. Apply lime and/or dolomite		X	X		
13. Plow land	X				
14. Disk land	X				
15. Level or smooth fields		X			
16. Mark off location of beds		X			
17. Shape or form beds		X			
18. Mark off planting spaces with bedwire		X			
II. Propagation and Planting of Plants					
1. Regulate temperature of cold storage unit		X			

## Floriculture Worker

	S	J	S	E	C
2. Plant seeds	X	X			
3. Plant bulbs	X	X			
4. Transplant seedlings or cuttings	X	X			
5. Set time clocks for automatic mist propagation system	X	X			
6. Take cuttings	X	X			
7. Plant cuttings	X	X			
8. Remove rooted cuttings	X	X			
9. Package cuttings for shipment		X			
10. Label plants or cuttings		X			
III. Cultural and Environmental Control Practices					
1. Pinch flowering plants	X	X			
2. Disbud flowering plants	X	X			
3. Prune plants	X	X			
4. Apply growth regulating chemicals		X			
5. Force bulbs (control temperature, moisture and light)	X	X			
6. Install shade cloth		X			
7. Apply shading compound or paint to greenhouse glass	X	X			
8. Install black cloth to regulate photoperiod		X			
9. Provide the required light intensity for photoperiod control	X	X			
10. Regulate time clocks		X			
11. Adjust or control temperature (air conditioning, vents or fans)		X			
12. Check and turn on field heaters		X			
13. Cultivate soils (rototill soils)	X	X			
14. Aerate compacted soils in beds		X			
15. Stake and tie plants	X	X			



## Floriculture Worker

	S	J	I	S	E	C
16. Raise or elevate bedwire		X				
17. Repair broken pipes, sprinkler heads, mist heads and/or valves		X				
18. Apply granular fertilizer	X	X				
19. Apply liquid fertilizer	X	X				
20. Locate and report any malfunctions of fertilizer injection system		X				
IV. Irrigation Practices						
1. Set time control valves (clocks)		X				
2. Hand irrigate plants (hand watering)	X	X				
3. Apply water in ditches or furrows (furrow irrigation)		X				
4. Regulate overhead irrigation system (time clocks)		X				
5. Regulate trickle irrigation system (ooze system)		X				
6. Pump water for irrigation		X				
7. Make minor electrical repairs and replace seals on irrigation supply pump		X				
V. Plant Pest and Disease Control						
1. Report disease and insect damage	X	X				
2. Mix chemicals		X				
3. Apply chemicals		X				
4. Remove diseased plants	X	X				
5. Remove weeds manually from potted plants	X	X				
6. Remove weeds manually from floral crops	X	X				
7. Remove weeds with tractor drawn mechanical cultivator		X				

## Floriculture Worker

	S	D	I	S	E	C
8. Set out poisoned bait to eradicate rodents		X				
9. Identify and report spray damage		X				
10. Clean spray equipment after use (nozzle, tanks, hoses, etc.)	X	X				
11. Repair lines and nozzles on spray equipment		X				
VI. Harvesting Crops						
1. Cut flowers		X				
2. Count and bunch flowers		X				
3. Prepare and place cut flowers in water or preservative		X				
4. Load potted plants for hauling		X				
5. Remove salable plants from bed or benches		X				
6. Dig bulbs or corms		X				
7. Clean and size harvested bulbs and corms		X				
8. Dry harvested bulbs or corms		X				
9. Treat bulbs or corms to control fungi or other disease organisms		X				
10. Remove bedwire from harvested area		X				
11. Cut, count and bunch fern		X				
VII. Packaging, Storage and Shipment						
1. Grade potted flowers or foliage plants		X				
2. Grade cut flowers		X				
3. Remove dead and diseased plant parts		X				
4. Place plants (floral and foliage) in storage		X				
5. Prepare invoices and shipping labels		X				
6. Package orders for shipment		X				
7. Assemble shipping cartons		X				
8. Inventory plants		X				

## Floriculture Worker

	S	J	I S	E	C
VIII. Miscellaneous Maintenance and Repairs					
1. Grease equipment		X			
2. Oil electric motors		X			
3. Sharpen hand tools	X	X			
4. Repair wooden greenhouse benches		X			
5. Prepare and paint equipment		X			
6. Paint greenhouse frames, and other structures		X			
7. Replace and glaze broken greenhouse lights		X			
8. Replace plastic covering on greenhouse structure		X			
9. Repair wooden portions of the greenhouse superstructure		X			
10. Replace damaged sections of saran		X			
11. Replace damaged support wires for saran or black cloth		X			
12. Replace valves on irrigation system		X			
13. Replace gaskets on irrigation system		X			

		Hrs.	Completed Courses		Total Completed
			Transfer Hours	LLC Hours	
<u>Communications Skills:</u>					
Communications I or Composition I (42.050 or 42.120)		4	_____	_____	_____
Public Speaking (94.131)		4	_____	_____	_____
<u>Mathematics/Science:</u>					
Math. (62.122 or above) or Life Science (56.100 or above or Physical Science (84.100 or above)		4	_____	_____	_____
<u>Liberal Science:</u>					
Human Relations (90.050)		8	_____	_____	_____
Elective (--.040 or above)			_____	_____	_____
<u>Health:</u>					
Health/P.E.		4	_____	_____	_____
					24 h
<u>Co-op:</u>					
Field Experience I	30.050	5	_____	_____	_____
Seminar I	30.051	1	_____	_____	_____
Field Experience II	30.052	5	_____	_____	_____
Seminar II	30.053	1	_____	_____	_____
Field Experience III	30.054	5	_____	_____	_____
Seminar III	30.055	1	_____	_____	_____
Field Experience IV	30.076	5	_____	_____	_____
Seminar IV	30.077	1	_____	_____	_____
Field Experience V	30.078	5	_____	_____	_____
Seminar V	30.079	1	_____	_____	_____
Field Experience VI	30.080	5	_____	_____	_____
Seminar VI	30.081	1	_____	_____	_____
					36 h
<u>Electives (Floriculture)</u>					
Intro. to Horticulture	15.120	4	_____	_____	_____
General Botany	56.101	4	_____	_____	_____
Care of House Plants	56.102	1	_____	_____	_____
Organic & Traditional	56.103	2	_____	_____	_____
Garden Practices					
Outdoor Flower Gardening	56.104	2	_____	_____	_____
Home Landscaping & Lawn	56.105	2	_____	_____	_____
Care					
General Local Flora	56.222	4	_____	_____	_____
Environmental Science	56.201	4	_____	_____	_____
Field Biology /Field	56.220	6	_____	_____	_____
Geology					
Small Bus. Management	23.084	4	_____	_____	_____
Intro. to Business	23.142	4	_____	_____	_____
Understanding Art	17.250	4	_____	_____	_____
Design I	17.110	4	_____	_____	_____
					36 h
					96 h

## 96 hrs. - Associate in Applied Science

FLORICULTURE

## 6 qtr. Course Schedule

1st (fall)		2nd (winter)	
Field Exp. I	5	Field Exp. II	5
Seminar I	1	Seminar II	1
*Comm. I/Comp. I	4	*Human Rel.	4
Outdoor Flower Gard.	2	*Health P.E.	4
Home Landscaping & Lawn Care	2	Elective	<u>4</u>
	<u>14</u>		18
3rd (spring)		4th (fall)	
Field Exp. III	5	Field Exp. IV	5
Seminar III	1	Seminar IV	1
*Math/Science	4	Environmental Science	4
Introduction to Horticulture	4	Electives	<u>5</u>
Organic & Trad. Garden Prac.	2		<u>15</u>
	<u>16</u>		
5th (winter)		6th (spring)	
Field Exp. V	5	Field Exp. VI	5
Seminar V	1	Seminar VI	1
*Social Sci. (Elec.)	4	General Local Flora	4
*Public Speaking	4	Care of House Plants	1
General Botany	<u>4</u>	Elective	<u>4</u>
	18		<u>15</u>

24 hrs. general ed.\*

36 hrs. Co-op field exp. and seminar

36 hrs. career related electives

### Electives

#### Course Descriptions - Floriculture

15.120*	<u>Introduction to Horticulture</u>	4 hours
(Spring)	An introduction to the principles and practices involved in the development, production, and use of horticulture crops (fruits, vegetables, greenhouse, turf, nursery, floral and landscape).	
56.101*	<u>General Botany</u>	4 hours
	This course is designed to introduce students to the anatomy, physiology, and morphology of the seed plant and to the diversification of plants in the plant kingdom.	
	(Prerequisite: 56.100 a general ed. requirement or equivalent)	
56.102*	<u>Care of House Plants</u>	1 hour
(Fall)	How to select, care for, propagate, and identify ailments of house plants. Practical	
(Spring)	work in the greenhouse will include potting, making cuttings and seed sowing.	
56.103*	<u>Organic and Traditional Garden Practices</u>	2 hours
(Spring)	The principles and practices involved in the selection, growth, harvest, and storage of garden crops for food, fun and profit.	
56.104*	<u>Outdoor Flower Gardening</u>	2 hours
(Fall)	How to select, care for, propagate, use and identify annual and perennial flowering	
(Spring)	plants used in outdoor flower beds.	
56.105*	<u>Home Landscaping &amp; Lawn Care</u>	2 hours
(Fall)	This course deals with the principles of landscape design, as well as with the practical	
(Spring)	application of these principles to make one's property more valuable, beautiful, and functional. Emphasis will be placed on the use of trees, shrubs, and turf to create the most attractive and functional setting for one's home.	

\*College Transfer

- 56.222\*      General Local Flora      4 hours
- (Spring)      This course focuses on plant distribution of North America, identification of trees, shrubs, and herbs, and the lesser plants by appropriate keys, knowing and appreciating common plants.
- (Prerequisite: 56.101)
- 56.201\*      Environmental Science (lab fee \$2.00)      4 hours
- (Fall)      This course deals with the principles that govern natural environments including man's relationship to them. A large part of the course will be conducted in the field observing and measuring various aspects of ecology.
- (Spring)
- (Prerequisite: 56.100 or permission from instructor)
- 56.220\*      Field Biology/Field Geology (lab fee \$2.00)      6 hours
- (Fall)      This course focuses on a field study of various life forms with the related physical environment features of a variety of geographical areas of the United States. (Involves travel)
- (Spring)
- 23.084      Small Business Management      4 hours
- (Winter)      This course attempts to isolate and provide solutions to problems encountered by individuals who desire to own and/or manage a small business enterprise. Content includes: area of opportunity and the outlook for small business operations, self analysis of the potential small business manager, success and failure patterns, capital needs and capital sources, organizing, directing, and controlling the small business, financial management, locations, facilities, personnel relations, advertising, pricing, consumer credit, and inventory control.
- 23.142\*      Introduction to Business      4 hours
- This course covers the function, objectives, organization, and role of business in a free-enterprise system. The course is designed to provide an over-view of the field of business for the student as a consumer and/or to provide a framework into which specialized fields of study may be viewed in perspective to the total field of business.

17.250\*      Understanding Art      4 hours

This course is designed to develop an appreciation of the visual arts and their relationships to man and his environment.

17.110\*      Design 1      4 hours

(Winter)      This course covers the elements and principles of design emphasizing two-dimensional organization of forms based on discussion and studio problems.

(Credit is not granted to students  
who have received credit in 17.140)

\*College Transfer



FLORICULTURE - LRC BOOKS  
RETAIL FLORIST

The Greenhouse Environment SB. 415 .M3  
Decorating With Plants SB. 419 .A44  
The Miniature Flower Arrangement Book SB 449 .B433  
How To Arrange Flowers SB 449 .C8  
Flower Arrangement: designs for today SB 449 .W549  
Spring Flowers SB 406 .B73  
Summer Flowers SB 406 .B74  
Popular Flowering Plants SB 406 .F548  
Flowers When You Want Them SB 414 .J35  
Popular Flowering Shrubs SB 435 .F584  
Beds & Borders SB 472 .B768  
Horticultural Science SB 318 .J35  
Your Future in the Nursery Industry SB 51 .P55  
Dictionary of Gardening REF SB 45 .D63  
Greenhouse Grow How SB 415 .P49  
The Solar Greenhouse Book SB 416 .S64  
Modern Potting Composts S 589.8 .B86  
Plant Disease Handbook SB 731 .W47  
Pests & Diseases SB 603.5 .C7  
The Physiology of Flowering OK 731 .H53  
Spot Gardens SB 473 .A75

APPENDIX G  
Food Services Curriculum Materials

## FOOD MANAGEMENT, PRODUCTION AND SERVICES

### Task Analysis

- I. Organizes supplies, supervises employees, and plans menus and cooking
- II. Directs everyday activities and implements work schedule
- III. Inspects and evaluates foods and premises
- IV. Maintains forms, records and reports
- V. Prepares food for cooking and/or serving
- VI. Cooks breakfast type foods
- VII. Cooks meats, fish, fowl, vegetables and fruits
- VIII. Cooks breads, pastries and deserts
- IX. Cooks soups, sauces and prepares salads
- X. Prepares serving lines
- XI. Cleans and maintains dining area and kitchen equipment

TRAINING PLAN

## FOOD MANAGEMENT PRODUCTION AND SERVICES

	School	Job	Independent study	Evaluation	Comment
I. Organizing and Planning					
1. Check out supplies from storeroom, cooler and freezer		X			
2. Convert recipe to larger or smaller product		X	X		
3. Supervise employees		X			
4. Weigh and measure staple ingredients		X			
5. Plan cooking schedule		X			
6. Plan menus		X			
7. Plan menus to utilize leftovers		X			
8. Plan and organize overall operational functions for all work in the kitchen		X			
9. Take over duties of head chef in his absence		X			
10. Train employees in the functions of their jobs		X			
11. Make banquet preparations		X			
II. Directing and Implementing		X			
1. Answer telephone calls		X			
2. Place telephone calls		X			
3. Order food needed		X			
4. Meet and aid customers in a good-will capacity		X			
5. Calculate cost and purchase food		X			
6. Store equipment and supplies as needed in assigned areas		X			

## Food Management Production and Services

	S	J	I S	E	C
III. Inspecting and Evaluating					
1. Inspect facility for compliance with health and sanitation laws		X			
2. Inspect incoming food and beverages for quality and freshness		X			
3. Test food prepared by others		X			
IV. Maintaining Forms, Records, and Reports					
1. Prepare inventory records for purchased food	X	X			
2. Keep perpetual inventory of food items	X	X			
3. Receive, check and report shipments		X			
V. Preparing Food for Cooking or Serving					
1. Add finishing touches to prepared foods		X			
2. Slice cooked meats and other cold cuts by hand		X	X		
3. Slice cooked meats and other cold cuts by using electric slicing machine		X			
4. Cut cakes and pies		X			
5. Plate cakes and pies		X			
6. Cut, trim and bone beef, lamb, pork or fish into prescribed portions for steaks, chops, and fillets		X			
7. Dish deserts		X			
8. Make sandwiches		X			
9. Fill containers with ice and pour beverages		X			
10. Prepare dehydrated or concentrated foods		X			
11. Season and bread meats, seafood, and fowl for baking, roasting, broiling and frying.		X			

## Food Management Production and Services

	S	J	I	S	E	C
12. Spread icing on cakes		X				
13. Trim, cut, and shred fruits and vegetables		X				
14. Wrap foods for baking		X				
VI. Cooking Food (Breakfast)						
1. Brew tea		X				
2. Make coffee		X				
3. Cook hot cereal		X				
4. Cook eggs by simmering		X				
5. Cook eggs by frying		X				
6. Cook eggs by poaching		X				
7. Cook eggs by scrambling		X				
8. Make biscuits		X				
9. Make gravies		X				
10. Make pancakes		X				
11. Make toast		X				
VII. Cooking Food (Meats, fish, fowl, vegetables and fruits)						
1. Cook meats, fish and fowl by baking or roasting		X				
2. Cook meats, fish and fowl by barbecuing		X				
3. Cook meats, seafood and fowl by braising		X				
4. Cook meats, fish and fowl by broiling		X				
5. Cook meats, fish and fowl by frying		X				
6. Cook meats, seafood and fowl by stewing and steaming		X				
7. Cook vegetables and fruits by baking		X				
8. Cook vegetables and fruits by boiling, simmering and steaming		X				

## Food Management Production and Services

	S	J	S	I	C
9. Cook vegetables and fruits by broiling		X			
10. Cook vegetables and fruits by deep fat frying		X			
11. Cook vegetables and fruits by glazing		X			
12. Cook vegetables by sauteing		X			
III. Cooking Food (Breads, Pastries, Deserts)					
1. Make boiled custard		X			
2. Make cakes		X			
3. Make cobbler		X			
4. Make rolled cookies		X			
5. Make bar cookies		X			
6. Make drop cookies		X			
7. Make corn bread		X			
8. Make muffins		X			
9. Make pie crust		X			
10. Make yeast breads		X			
11. Prepare congealed desserts		X			
12. Prepare fillings for pies		X			
13. Prepare cake icings		X			
IX. Cooking Food (Miscellaneous)					
1. Prepare soup stock		X			
2. Prepare soup		X			
3. Make salads		X			
4. Make salad dressings		X			
5. Make sauces		X			
6. Prepare hors d'oeuvres		X			

## Food Management Production and Services

	S	J	I S	E	C
7. Mash potatoes		X			
8. Parboil vegetables, fruits and meats		X			
9. Prepare glazes		X			
10. Load oven racks		X			
11. Store food		X			
<b>I. Prepare Serving Lines</b>					
1. Arrange food for service		X			
2. Keep food at proper temperature		X			
3. Serve food according to type of service required		X			
4. Fill condiment containers		X			
<b>II. Cleaning and Maintaining Dining Hall &amp; Kitchen Equipment</b>					
1. Clean and store equipment		X			
2. Clean and sanitize kitchen blocks		X			
3. Wash dishes, glasses, silverware, trays, pots and pans by machine		X			
4. Wash dishes, glasses, silverware, trays, pots and pans by hand		X			
5. Clean floors, windows, woodwork and counters		X			



		<u>Completed Courses</u>		<u>Total Completed</u>
		<u>Transfer Hours</u>	<u>LLC Hours</u>	
<u>Communications Skills:</u>		<u>Hrs.</u>		
Communications I or Composition I (42.050 or 42.120)		4	_____	_____
Public Speaking (94.131)		4	_____	_____
<u>Mathematics/Science:</u>				
Math. (62.122 or above) or Life Science (56.100 or above or Physical Science (84.100 or above)		4	_____	_____
<u>Social Science:</u>				
Human Relations (90.050)		8	_____	_____
Elective (---.040 or above)			_____	_____
<u>Health:</u>				
Health/P.E.		4	_____	_____
				<u>24 h</u>
<u>Co-op:</u>				
Field Experience I 30.050	5	_____	_____	_____
Seminar I 20.051	1	_____	_____	_____
Field Experience II 30.052	5	_____	_____	_____
Seminar II 30.053	1	_____	_____	_____
Field Experience III 30.054	5	_____	_____	_____
Seminar III 30.055	1	_____	_____	_____
Field Experience IV 30.076	5	_____	_____	_____
Seminar IV 30.077	1	_____	_____	_____
Field Experience V 30.078	5	_____	_____	_____
Seminar V 30.079	1	_____	_____	_____
Field Experience VI 30.080	5	_____	_____	_____
Seminar VI 30.081	1	_____	_____	_____
				<u>36 h</u>
<u>Electives (Food Services)</u>				
Nutrition 48.102	4	_____	_____	_____
Personal Hygiene I 48.120	2	_____	_____	_____
Personal Hygiene II 48.121	2	_____	_____	_____
First Aid & Safety II 48.179	4	_____	_____	_____
Community Health 48.270	4	_____	_____	_____
Food Sanitation 50.046	2	_____	_____	_____
Life Science 56.100	4	_____	_____	_____
General Zoology 56.111	4	_____	_____	_____
Microbiology 56.235	4	_____	_____	_____
Physical Science 84.101	4	_____	_____	_____
(Chemistry)				
Intro to Animal 15.110	4	_____	_____	_____
Science				
Small Business Man- 23.084	4	_____	_____	_____
agement				
Business Math 23.140	4	_____	_____	_____
Intro to Business 23.142	4	_____	_____	_____
Principles of 23.247	4	_____	_____	_____
Marketing				
				<u>36 h</u>
				<u>Total 96 h</u>

## 96 hrs. - Associate in Applied Science

FOOD SERVICES

## 6 qtr. Course Schedule

1st qtr. (fall)		2nd qtr. (winter)	
Co-op Field Exp. I	5	Co-op Field Exp. II	5
Co-op Seminar I	1	Co-op Seminar II	1
*Comm. I/Comp. I	4	*Sco. Sci Elec	4
Nutrition	4	*Health/P.E.	<u>4</u>
Personal Hygiene I & II	<u>4</u>		14
	18		
3rd qtr. (spring)		4th qtr. (fall)	
Co-op Field Exp. III	5	Co-op Field Exp. IV	5
Co-op Seminar III	1	Co-op Seminar IV	1
*Math/Science (56.100)	4	Intro to Animal	4
Physical Science	<u>4</u>	Science	
(Chemistry)	14	Community Health	4
		General Zoology	<u>4</u>
			18
5th qtr. (winter)		6th qtr. (spring)	
Co-op Field Exp. V	5	Co-op Field Exp. VI	5
Co-op Seminar V	1	Co-op Seminar VI	1
*Sco. Sci Elec	4	Elective	4
*Public Speaking	4	Elective	<u>4</u>
Elective	<u>4</u>		14
	18		

24 hours general ed. \*  
 36 hours Co-op field exp. & seminar  
 36 hours related electives

Electives

	Course Descriptions - Food Services	36 hours
48.102*	<u>Nutrition</u>	4 hours
	<p>This course focuses on understanding of the importance of good nutrition, the basic uses of food by the body, the basic four food groups, diet, food nutrients, and nutrition through the life cycle.</p> <p>(Same as 51.102)</p>	
48.120*	<u>Personal Hygiene I</u>	2 hours
(fall)	<p>This course is designed as a basic survey course which covers mental health, drug, alcohol, and tobacco education, nutrition and personal health.</p>	
48.121*	<u>Personal Hygiene II</u>	2 hours
(fall)	<p>This health education class focuses on problems of degenerative disease and communicable disease, sex education, marriage, and parenthood.</p>	
48.179*	<u>First Aid &amp; Safety II</u>	4 hours
	<p>This course provides an intensive study of advanced methods and skills of first aid and emergency care. American Red Cross Advanced First Aid Card will be given at the completion of the course, and also a standard CPR card. (48.178 is <u>not</u> a prerequisite.)</p>	
48.270*	<u>Community Health</u>	4 hours
(fall)	<p>This course focuses on factors in the physical, biological, and social environments that influence the magnitude and character of community health problems, goals and solutions.</p>	

50.046      Food Sanitation ?      2 hours

(night as needed)      Introduction to the field of food service and related professions; the role of the food service supervisor, his/her relationship to others in health care institutions, and ethics.

56.100\*      Life Science      4 hours

This course focuses on the fundamental processes and structures common to all living things and which are, therefore, basic to an understanding of both plants and animals.

56.111\*      General Zoology      4 hours

(fall)      This course focuses on a study of tissues, organs, systems, physiology, reproduction, and embryonic development, followed by a survey of the animal kingdom.  
(Prerequisite 56.100 equivalent.)

56.235\*      Microbiology      4 hours

(fall winter)      This course focuses on the fundamental concepts and techniques of microbiology. Included is the classification, morphology, and physiology of microorganisms.  
(Prerequisite 56.100; one course of chemistry is recommended.)

84.101\*      Physical Science (Chemistry ?)      4 hours

(spring)      This course focuses on principles of chemistry having particular application in the field of elementary ed.  
(Credit may not be accepted toward a degree for both Physical Science 84.101 and Chemistry 84.120.)

15.110\*      Intro to Animal Science      4 hours

(fall)      This course focuses on a study of beef, swine, sheep, poultry, and horses; and the scientific factors affecting nutrition, genetics, and evaluation.

23.084      Small Business Management      4 hours

This course attempts to isolate and provide solutions to problems encountered by individuals who desire to own and/or manage a small business enterprise. Content includes: areas of opportunity and the outlook for small business operations, self analysis of the potential small business manager, success and failure patterns, capital needs and capital sources, organizing, directing, and controlling the small business, financial management, locations, facilities, personnel relations, advertising, pricing, consumer credit, and inventory control.

23.140\*      Business Math      4 hours

This course covers basic applications of mathematics in the business world -- percentages, elementary algebra, interest, installment buying, statistics, insurance, and the like. It is designed to reinforce and expand social and business concepts held by the student through the use of mathematics. This course is taught largely on an independent basis.

23.142\*      Introduction to Business      4 hours

This course covers the function, objectives, organization, and role of business in a free-enterprise system. The course is designed to provide an over-view of the field of business for the student as a consumer and/or to provide a framework into which specialized fields of study may be viewed in perspective to the total field of business.

23.247\*      Principles of Marketing      4 hours

This course serves as an introduction to the field of marketing. Content includes: the identification, nature, and structure of target markets; the controllable variables in the marketing mix which include product lines, channels of distribution, pricing policies, advertising and promotion; and the uncontrollable variables which include legal environment, economic environment, resources and objectives of the firm, cultural environment, and the existing business structure.

\*College Transfer

## FOOD SERVICES

Library Resources

Food on Campus TX 946 .K56

The Financial Ingredient in Food Service Management TX 911.3 .F5 B64

Food & Beverage Control TX 911.3 .C65 K46

Food Service Planning TX 943 .K65

Aim for a Job in Restaurants & Food Service HD 8039 .H8 W4 (Career Center)

Modern Luncheonette Management TX 945 .F5

The Management of People in Hotels, Restaurants & Clubs TX 911 .L79

Starting a Small Restaurant TX 911.3 .M27 M54

Motels, Hotels, Restaurants & Bars NA 7840 .A7

Understanding Food TX 663 .K67

Food for Fifty TX 820 .F65

Quantity Cookery TX 820 .R5

A Handbook on Quantity Food Management TX 820 .S53

Quantity Food Service Recipes TX 820 .W65Y

Quantity Good Preparation TX 820 .Q8X

## FOOD SERVICE MAGAZINES

Chef Institutional

Cooking for Profit

The Cornell Hotel and Restaurant Admin. Quarterly

\*Institutions/Volume Feeding

Nations Restaurant News

\*Available at Lake Land College

## Career Guidance Center

Restaurant Managers - Occupational brief

Food Service Occupations - Occupational brief

Chefs and Cooks - Occupational brief



APPENDIX H  
Interior Decorating Curriculum Materials

## INTERIOR DECORATING

## TASK ANALYSIS

- I. Utilizes Principles of Design in Home Furnishings
- II. Selects and Arranges Accessories
- III. Selects Furniture and Floor Coverings
- IV. Selects Window Treatments and Wall Coverings
- V. Selects Tableware and Table Linens
- VI. Selects Household Linens
- VII. Selects Kitchen Equipment
- VIII. Performs Miscellaneous Duties

TRAINING PLAN

INTERIOR DECORATING

	School	Job	Independent Study	Evaluation	Comment
I. Utilizing Principles of Design in Home Furnishings					
1. Differentiate between an element and a principle of design	X				
2. Distinguish between structural and decorative designs	X				
3. Describe the characteristics of a quality design	X				
4. Differentiate between good and poor design	X				
5. Identify the quality or dimensions of color	X				
6. Identify the standard color harmonies	X				
7. Explore economy in home decoration through use of color	X				
8. Determine the effect of different textures in decoration	X				
II. Selecting and Arranging Accessories					
1. Define accessories and their functions		X			
2. Experiment with arranging accessories		X			
3. Determine the relationship of price to beauty and function of accessories		X			
4. Choose and arrange articles that harmonize in color, form, size and texture		X			
5. Combine articles that are interesting and pleasing in relationship		X			
6. Arrange articles so they may be viewed individually		X			
7. Identify lamps as to function and decoration		X			
8. Interpret informative tags and labels		X			
9. Identify the needs of the customer		X			

## INTERIOR DECORATING

	S	D	I	S	F	C
III. Selecting Furniture and Floor Coverings						
1. Identify types and characteristics of woods and upholstery materials used in furniture construction		X				
2. Identify factors of construction that will insure quality		X				
3. Identify terms used in construction of furniture		X				
4. Distinguish solid wood from veneered wood		X				
5. Interpret labels found on furniture which are required by the Federal Trade Commission		X				
6. Identify warranties of furniture		X				
7. Determine customer criteria such as function, style, durability, price, appropriateness, and comfort		X				
8. Identify present furnishings		X				
9. Identify styles of furniture and their distinguishing characteristics		X				
10. Determine factors considered in furniture selection such as "period designs", technological developments and architectural design		X				
11. Identify multipurpose furniture		X				
12. Select furniture in proportion to room and family size		X				
13. Obtain balance by placement of furniture in relation to doors, windows, fireplaces, etc.		X				
14. Intersperse wood and upholstered pieces of furniture		X				
15. Group furniture according to purpose and function		X				
16. Identify basic floor coverings (carpets, vinyls, woods, stone, etc.) their care, appearance and uses		X				

## INTERIOR DECORATING

	S	J	S	E	C
17. Identify fibers used in rug construction (wool, nylon, polyester, etc.)		X			
18. Identify warranties of carpets		X			
19. Identify factors to be considered when selecting floor coverings (durability, maintenance, insulation, beauty, etc.)		X			
20. Select floor coverings according to room size and purpose		X			
21. Select floor coverings to harmonize in color and texture with room furnishings		X			
22. Select floor coverings that harmonize when being placed adjacent to another		X			
Selecting Window Treatments and Wall Coverings					
1. Identify types of wall coverings (paint, paper, paneling, etc.)		X			
2. Identify function and care of each type		X			
3. Select wall coverings according to room size and purpose		X			
4. Select wall coverings to harmonize in color and texture with room furnishings		X			
5. Select one wall of a room for contrasting treatment		X			
6. Identify styles of window treatments (curtains, drapes, swags, valances, cornices, etc.)		X			
7. Identify function and care of each type		X			
8. Select window treatments according to room size, window size, and purpose		X			
9. Select window treatments to harmonize in color and texture with room furnishings		X			

## INTERIOR DECORATING

	S	J	I S	E	C
V. Selecting Tableware and Table Linens					
1. Differentiate between various types of tableware (porcelain, china, pottery, plastic, etc.)		X	X		
2. Distinguish between different types of silverware (sterling, stainless, etc.)		X	X		
3. Identify basic pieces of silver in a place setting		X	X		
4. Appraise cost in relation to attractiveness and usefulness		X	X		
5. Identify the pieces in a "set" of china		X	X		
6. Identify the pieces in a "starter set"		X	X		
7. Identify pieces in a "place setting"		X	X		
8. Differentiate between the different types of glassware		X	X		
9. Unpack a crate of glassware, inspecting for damage		X	X		
10. Identify the types of linens and standard size available		X	X		
11. Select and coordinate tableware, flatware, glassware, linens		X	X		
VI. Selecting Household Linens					
1. Identify types of bed linens and standard sizes available		X	X		
2. Analyze fibers used in their construction		X	X		
3. Determine meaning and importance of thread count		X	X		
4. Determine types of blankets available (wool, acrylic, thermal, electric, etc.)		X	X		
5. Determine the types of towels available and standard size		X	X		
6. Interpret to customers the meanings of hang tags and labels		X	X		
7. Identify number of linens required per family size		X	X		
8. Estimate relative costs of different types of bed linen		X	X		
9. Select linens that will harmonize with the room		X	X		

## INTERIOR DECORATING

	S	J	S I E	C
VII. Selecting Kitchen Equipment				
1. Identify the types of materials used in the construction of kitchen equipment (aluminum, cast-iron, porcelain, etc.)		X	X	
2. Identify construction details which contribute to quality		X	X	
3. Identify guarantees, seals, warranties and labels		X	X	
4. Compare and contrast consumer guides		X	X	
5. Analyze the comparative values of different grades of appliances		X	X	
6. Assess factors that influence the choice of kitchen utensils and appliances		X	X	
7. Select kitchen equipment to harmonize with floor and wall coverings		X	X	
8. Select kitchen equipment according to size of room and arrangement of built-ins		X	X	
III. Performing Miscellaneous Duties				
1. Answer telephone and take messages		X		
2. Clean and organize accessory items and arrange displays		X		
3. Keep catalogs and swatch books in order		X		
4. Mark retail prices in swatch books		X		
5. Prepare price tags		X		
6. File paid invoices		X		
7. Count merchandise for inventory	X	X		
8. Maintain perpetual inventory system	X	X		
9. Take customer payments		X		

## INTERIOR DECORATING

	S	J	I S	E	C
10. Maintain accounts receivable ledger	X	X			
11. Check out cash register		X			
12. Type purchase orders, letters, memos, etc.	X	X			
13. Assist in making window and floor arrangements		X			



	Hrs.	Completed Courses		Total Completed
		Transfer Hours	LLC Hours	
<u>Communications Skills:</u>				
Communications I or Composition I (42.050 or 42.120)	4	_____	_____	_____
Public Speaking (94.131)	4	_____	_____	_____
<u>Mathematics/Science:</u>				
Math. (62.122 or above) or Life Science (56.100 or above or Physical Science (84.100 or above)	4	_____	_____	_____
<u>Social Science:</u>				
Human Relations (90.050)	8	_____	_____	_____
Elective (---.040 or above)				
<u>Health:</u>				
Health/P.E.	4	_____	_____	_____
				<u>24 h</u>
<u>Co-op:</u>				
Field Experience I 30.050	5	_____	_____	_____
Seminar I 30.051	1	_____	_____	_____
Field Experience II 30.052	5	_____	_____	_____
Seminar II 30.053	1	_____	_____	_____
Field Experience III 30.054	5	_____	_____	_____
Seminar III 30.055	1	_____	_____	_____
Field Experience IV 30.076	5	_____	_____	_____
Seminar IV 30.077	1	_____	_____	_____
Field Experience V 30.078	5	_____	_____	_____
Seminar V 30.079	1	_____	_____	_____
Field Experience VI 30.080	5	_____	_____	_____
Seminar VI 30.081	1	_____	_____	_____
				<u>36 h</u>
<u>Electives - Interior Decorating</u>				
Understanding Art 17.250	4	_____	_____	_____
Design I 17.110	4	_____	_____	_____
Design II 17.111	4	_____	_____	_____
Interior Decorating 17.012*	4	_____	_____	_____
Technical Drafting 35.050	4	_____	_____	_____
Principles of Salesman-ship 23.058	4	_____	_____	_____
Principles of Retailing 23.086	4	_____	_____	_____
Principles of Advertising 23.087	4	_____	_____	_____
Business Math. 23.140	4	_____	_____	_____
Principles of Marketing 23.247	4	_____	_____	_____
Management Fundamentals 23.251	4	_____	_____	_____
Small Business Management 23.084	4	_____	_____	_____
Introduction to Bus. 23.142	4	_____	_____	_____
				<u>36 h</u>

Total 96 h

Does not apply to Associate Degree

## 96 hrs. - Associate in Applied Science

INTERIOR DECORATOR

## 6 qtr. Course Schedule

1st (fall)		2nd (winter)	
Field Exp. I	5	Field Exp. II	5
Seminar I	1	Seminar II	1
*Comm. I/Comp. I	4	*Human Relations	4
Understanding Art	4	*Health/P.E.	4
	<u>14</u>	Design I	4
			<u>18</u>
3rd (spring)		* 4th (summer)	
Field Exp. III	5	Field Exp. IV	5
Seminar III	1	Seminar IV	1
*Math/Science	4	Principles of Sales-	
Principles of Adver.	4	manship	4
Business Math.	4	Principles of Retailing	4
	<u>18</u>		<u>14</u>
5th (fall)		6th (winter)	
Field Exp. V	5	Field Exp. VI	5
Seminar V	1	Seminar VI	1
*Sco. Sci (elec.)	4	Elective	4
*Public Speaking	4	Elective	4
Tech. Drafting	4		<u>14</u>
	<u>18</u>		

\*You may also begin with this summer qtr. schedule.

24 Hours general ed.\*

36 Hours co-op field exp. & seminar

36 Hours related electives

Electives

Course Descriptions - Interior Decorator

17.250*	<u>Understanding Art</u>	4 hours
	This course is designed to develop an appreciation of the visual arts and their relationships to man and his environment.	
17.110*	<u>Design I</u>	4 hours
(winter)	This course covers the elements and principles of design emphasizing two dimensional organization of forms based on discussion and studio problems.	
	(Credit is not granted to students who received credit in 17.140)	
17.111*	<u>Design II</u>	4 hours
(Spring if offered)	This course focuses on continued study of elements and principles of design with emphasis on three-dimensional organization or form with various media.	
17.012	<u>Interior Decorating</u>	4 hours
	This course is designed to develop an awareness of the personal needs of the family in the design and furnishing of the home. Covers teaching the basic components of design, color, proportions, texture and rhythm in various styles of decor - both historic and temporary.	
	(Does <span style="border: 1px solid black; padding: 0 2px;">not</span> apply to Associate Degrees.)	
35.050	Technical Drafting (lab fee \$3)	4 hours
(Fall)	This course is an introductory overview of general drafting. Emphasis is placed on freehand sketching, instrument drawing, orthographic views, sectioning, dimensioning, and general blueprint reading.	

\*College Transfer

23.058      Principles of Salesmanship      4 hours

(Summer)      This course covers various phases of salesmanship such as buying habits of the customer, buying motives, the pre-approach, presentation and demonstration, handling objections, closing the sale, suggestion, and sale follow-up.

23.086      Principles of Retailing      4 hours

(Summer)      This course is designed for (1) those who own or plan to become owners of a retail store, (2) those who are involved or plan to become involved in the management function of a retail store and/or (3) those who desire a general knowledge of retailing as an institution. Content includes: opportunities and careers in the field of retailing, planning the store location, facilities and layout, sale promotion, customer services, retail financial management and control, and buying, receiving, pricing, and storing as elements of effective merchandise management.

23.087      Principles of Advertising      4 hours

(Spring)      This course provides a comprehensive survey of the whole field of advertising to show the relationship of advertising to history and economics. The course covers such topics as how to write advertising, how to display advertising, where to publish advertising, sales promotion, creative development of advertising, media selection, and the administration problems involved in advertising.

23.140\*      Business Math      4 hours

This course covers basic applications of mathematics in the business world-percentages, elementary algebra, interest, installment buying, statistics, insurance, and the like. It is designed to reinforce and expand social and business concepts held by the student through the use of mathematics. This course is taught largely on an independent basis.

23.247\*      Principles of Marketing      4 hours

This course serves as an introduction to the field of marketing. Content includes:

the identification, nature and structure of target markets; the controllable variables in the marketing mix which include product lines, channels of distribution, pricing policies, advertising promotion; and the uncontrollable variables which include legal environment, economic environment, resources and objectives of the firm, cultural environment, and the existing business structure.

23.251\*      Management Fundamentals      4 hours

This course serves as an introduction to the field of management. Content includes: organizational structure, policies and objectives, leadership techniques, management teamwork, communications, delegation of authority, methods improvement, job design, rules and disciplinary policies, motivation and morale, employee recruitment and selection procedures, training and orientation, and employee evaluation.

23.084      Small Business Management      4 hours

(Winter)      This course attempts to isolate and provide solutions to problems encountered by individuals who desire to own and/or manage a small business enterprise. Content includes: area of opportunity and the outlook for small business operations, self analysis of the potential small business manager, success and failure patterns, capital needs and capital sources, organizing directing, and controlling the small business, financial management, locations, facilities, personnel relations, advertising, pricing, consumer credit and inventory control.

23.142\*      Introduction to Business      4 hours

This course covers the function, objectives, organization, and role of business in a free-enterprise system. The course is designed to provide an over-view of the field of business for the student as a consumer and/or to provide a framework into which specialized fields of study may be viewed in perspective to the total field of business.

\*College Transfer

## Library Resources

## Interior Decorating

House Beautiful's Home Decorating NK 2113 .H6

House Beautiful's Decorating for Brides & Young

Marrieds NK 2113 .H68

The Modern House NA 7127 .R64

The Art of Making Houses Liveable TH 4816 .S77

The Home Decorator's Color Book NK 2115 .H4

Decorating: A Realistic Guide NK 2115 .G425

Interior Decoration NK 2115 .I5X

Americans at Home NK 2002 .P4

The New York Times Book of Interior Design & Decoration

NK 2004 .S57

Decoration U.S.A. NK 2002 .W53

How to Invest in Beautiful Things TX 335 .C32

Decorative Techniques TT 750 .T55

Making Home Furnishings TT 715 .T55

Upholstering TT 198 .B74

Modernizing & Repairing Upholstered Furniture TT 198 .B325

New Essentials of Modern Upholstery NK 3195 .B27

Upholstery: Refinishing & Restyling TT 198 .L8

The Complete Guide to Furniture Styles NK 2270 .B63

Decorating With Plants SB 419 .A44

Chippendale Furniture NK 2542 .C5 .C6

## Interior Decorating Magazines

Interior Design

Interiors

American Fabrics and Fashions

American Home

\*Apartment Life

Better Decorating Ideas

Better Homes and Gardens

Budget Decorating and Remodeling

Home Center Magazine

\*House and Garden

House and Garden Decorating Guide

\*House Beautiful

One Thousand and One Decorating Ideas

1001 Decorating Ideas

Residential Interiors

Career Guidance Center

Interior Decorating

Interior Designers - Occupational brief

Your Future As A Designer - brief

APPENDIX I  
Photography Curriculum Materials



## PHOTOGRAPHY

### Task Analysis

- I. Processes Films and Negatives
- II. Copies and Reproduces
- III. Uses Optics, Camera Systems and Filters
- IV. Uses Color Photography Techniques
- V. Photographs Special Assignments
- VI. Performs Clerical Duties

TRAINING PLAN  
PHOTOGRAPHY

	School	Job	Independent Study	Evaluation	Comment
I. Processing Film and Negatives					
1. Expose and process film		X			
2. Expose and process film using light meter		X			
3. Expose, process, and finish black-and-white film by tank method		X			
4. Expose, process, and finish black-and-white film by tray method		X			
5. Identify and letter negatives		X			
6. Produce contact prints		X			
7. Produce prints on graded or variable-contrast paper		X			
8. Produce acceptable prints from 4 x 5 negatives		X			
9. Produce acceptable prints from 120-size negatives		X			
10. Produce acceptable prints from 35 mm negatives		X			
11. Expose and process prints with a semi-automatic print processor		X			
12. Tone prints		X			
13. Spot prints		X			
14. Mount prints		X			
15. Prepare and store developer		X			
16. Expose and process prints to confirm chemical solution performance		X			
II. Copying and Reproducing					
1. Identify the proper use of copy equipment (cameras, lenses, illumination equipment and filters)		X			

## PHOTOGRAPHY

	S	T	S	I	C
2. Expose and process negatives and determine the effect of a filter on various colors		X			
3. Expose and process negatives to specified ratio or scale		X			
4. Copy the subject and correct the defect in a continuous-tone print		X			
5. Copy the subject to a specified ratio		X			
6. Etch, spot and block copy negatives		X			
7. Expose and process prints to correct defects		X			
8. Expose and process film using a specialized copy camera		X			
9. Expose and process black-and-white negatives using a specialized slide copier		X			
III. Using Optics, Camera Systems, and Filters					
1. Photograph examples, using three different lenses, which show image-size control, perspective control, flare control, critical aperture effects, and the 2/5th rule.		X			
2. Expose, process, and proof-print selected subjects to illustrate: image size, camera angle, control of scene brightness range, and subject placement.		X			
3. Expose, process, and proof-print selected subjects to illustrate basic types of acceptable photographic composition		X			
4. Expose, process, and proof print selected subjects to illustrate, haze, penetration, pictorial rendition, and tonal contrast		X			
5. Identify purpose and application of specific filter designations		X			

## PHOTOGRAPHY

	S	J	I S	E	C
6. Expose, process, and proof print selected subjects through contrast, correction, neutral density, and polarizing filters					
7. Employ creative and communicative composition techniques		X			
IV. Using Color Photography Techniques					
1. List the additive primary colors and their complementary subtractive primaries	X	X			
2. List the colors formed by the additive and subtractive color process	X	X			
3. Identify the effects of filters on white light		X			
4. Identify where exposure occurs and dyes are formed on reversal color film		X			
5. Identify where exposure occurs and dyes are formed on negative color film		X			
6. Identify where exposure occurs and dyes are formed on infrared color film		X			
7. Mix reversal color chemical solution		X			
8. Expose reversal color film		X			
9. Process reversal color film		X			
10. Duplicate and process color slides		X			
11. Mount color slides		X			
12. Mix color chemicals for color films		X			
13. Construct a color process central chart	X	X			
14. Identify out-of-control strips on chart		X			

## PHOTOGRAPHY

	S	J	I	S	E	C
15. Expose and process daylight color film		X				
16. Expose and process negative color film of portraits		X				
17. Expose and process black-and-white prints from color negatives		X				
18. Mix and certify color-print chemicals		X				
19. Expose and process color prints from standard negatives		X				
Photographing Special Assignments						
1. Determine equipment needed (cameras, lighting, filters, tripods, etc.)						
2. Determine type and amount of film required to shoot the job		X				
3. Develop a dominant theme for a pictorial story		X				
4. Expose and process film suitable for production of newspaper quality prints		X				
5. Make a photographic personality study		X				
6. Make editorial photographs		X				
7. Make publicity photographs of people or activities		X				
8. Photograph a news event		X				
9. Photograph a person in his/her work environment		X				
10. Photograph a small group		X				
11. Photograph a sports event		X				
12. Photograph commercial products advertisement (furniture, food, clothes, etc.)		X				
13. Photograph educational slide/filmstrip presentation		X				
14. Photograph industrial products		X				

## PHOTOGRAPHY

	S	J	S	E	C
15. Photograph picture story elements according to a script		X			
16. Photograph real estate advertisement		X			
17. Plan a layout for a pictorial narrative		X			
18. Plan an organized sequence of photos		X			
19. Plan and prepare camera position and compositioned elements		X			
20. Plan and prepare for key shots, lead pictures and impact		X			
21. Plan and prepare continuity and logical progression		X			
22. Select and photograph a subject from different angles following basic rules of composition		X			
VI. Performing Clerical Duties					
1. Arrange for equipment repair or replacement		X			
2. Compute billings for work done		X			
3. Follow up supply requisitions		X			
4. Make open purchases		X			
5. Order parts and supplies		X			
6. Screen parts or equipment received from supply source		X			
7. Select job orders		X			
8. Take inventory of tools, equipment, and supplies		X			

AAS CHECK LIST - CO-OP  
PHOTOGRAPHY

148

		Completed Courses		
		Transfer	LLC	Total
		Hours	Hours	Completed
	Hrs.			
<u>Communications Skills:</u>				
Communications I or Composition I (42.050 or 42.120)	4	_____	_____	_____
Public Speaking (94.131)	4	_____	_____	_____
<u>Mathematics/Science:</u>				
Math. (62.122 or above) or Life Science (56.100 or above or Physical Science (84.100 or above)	4	_____	_____	_____
<u>Social Science:</u>				
Human Relations (90.050)	8	_____	_____	_____
Elective (--.040 or above)				
<u>Health:</u>				
Health/P.E.	4	_____	_____	_____
				<u>24 hr</u>
<u>Co-op:</u>				
Field Experience I 30.050	5	_____	_____	_____
Seminar I 20.051	1	_____	_____	_____
Field Experience II 30.052	5	_____	_____	_____
Seminar II 30.053	1	_____	_____	_____
Field Experience III 30.054	5	_____	_____	_____
Seminar III 30.055	1	_____	_____	_____
Field Experience IV 30.076	5	_____	_____	_____
Seminar IV 30.077	1	_____	_____	_____
Field Experience V 30.078	5	_____	_____	_____
Seminar V 30.079	1	_____	_____	_____
Field Experience VI 30.080	5	_____	_____	_____
Seminar VI 30.081	1	_____	_____	_____
				<u>36 hr</u>
<u>Electives (Photography)</u>				
Understanding Art 17.250	4			
Design I 17.110	4			
Design II 17.111	4			
Drawing I 17.100	4			
Principles of Salesmanship 23.058	4			
Principles of Retailing 23.086	4			
Principles of Advertising 23.087	4			
Business Math. 23.140	4			
Principles of Marketing 23.247	4			
Management Fundamentals 23.251	4			
Small Bus. Management 23.084	4			
Introduction to Business 23.142	4			
The Child in the Family 51.088	4			
& Culture				<u>36 hr</u>
				Total 96 hr

Community Ed. Courses - do not apply to degree

Basic Photography	11.802
Intro. to Film and Film	11.806
Making	

## 96 hrs. - Associate in Applied Science

PHOTOGRAPHY

## 6 qtr. Course Schedule

1st (fall)		2nd (winter)	
Field Exp. I	5	Field Exp. II	5
Seminar I	1	Seminar II	1
*Comm I/Comp I	4	*Human Relations	4
Understanding Art	<u>4</u>	*Health/P.E.	4
	14	Design I	<u>4</u>
			18
3rd (spring)		*4th (summer)	
Field Exp. III	5	Field Exp. IV	5
Seminar III	1	Seminar IV	1
*Math/Science	4	Principles of Sales-	4
Principles of Advertising	4	manship	
Bus. Math.	<u>4</u>	Principles of Re-	<u>4</u>
	18	tailing	14
5th (fall)		6th (winter)	
Field Exp. V	5	Field Exp. VI	5
Seminar V	1	Seminar VI	1
*Sco. Sci (elec)	4	Elective	4
*Public Speaking	4	Elective	<u>4</u>
Drawing I	<u>4</u>		14
	18		

\*You may also begin with this summer qtr. schedule.

24 hours general ed. \*

36 hours co-op field exp. & seminar

36 hours related electives



\*College Transfer

Electives

Course Descriptions - Photography		36 hours
17.250*	<u>Understanding Art</u>	4 hours
	This course is designed to develop an appreciation of the visual arts and their relationship to man and his environment.	
17.110*	<u>Design I</u>	4 hours
(winter)	This course covers the elements and principles of design emphasizing two-dimensional organization of forms based on discussions and studio problems. (Credit is not granted to students who receive credit in 17.140)	
17.111*	<u>Design II</u>	4 hours
(spring if offered)	This course focuses on continued study of elements and principles of design with emphasis on 3-dimensional organization or form with various media.	
17.100	<u>Drawing I</u>	4 hours
(fall)	This course focuses on freehand drawing in various media; studies from life and nature leading to an understanding of one's visual environment and the development of an interpretative approach.	
23.058	<u>Principles of Salesmanship</u>	4 hours
(summer)	This course covers various phases of salesmanship such as buying habits of the customer, buying motives, the pre-approach, presentation and demonstration, handling objections, closing the sale, suggestion, and sale follow-up.	

23.086      Principles of Retailing      4 hours

(summer)      This course is designed for (1) those who own or plan to become owners of a retail store, (2) those who are involved or plan to become involved in the management function of a retail store and/or (3) those who desire a general knowledge of retailing as an institution. Content includes: opportunities and careers in the field of retailing, planning the store location, facilities and layout, sale promotion, customer services, retail financial management and control, and buying, receiving, pricing, and storing as elements of effective merchandise management.

23.087      Principles of Advertising      4 hours

(spring)      This course provides a comprehensive survey of the whole field of advertising to show the relationship of advertising to history and economics. The course covers such topics as how to write advertising, how to display advertising, where to publish advertising, sales promotion, creative development of advertising, media selection, and the administration problems involved in advertising.

(summer)

23.140\*      Business Math      4 hours

This course covers basic applications of mathematics in the business world-percentages, elementary algebra, interest, installment buying, statistics, insurance, and the like. It is designed to reinforce and expand social and business concepts held by the student through the use of mathematics. This course is taught largely on an independent basis.

23.247\*      Principles of Marketing      4 hours

This course serves as an introduction to the field of marketing. Content includes:

the identification, nature and structure of target markets; the controllable variables in the marketing mix which include product lines, channels of distribution, pricing policies, advertising promotion; and the uncontrollable variables which include legal environment, economic environment, resources and objectives of the firm, cultural environment, and the existing business structure.

23.251\*     Management Fundamentals     4 hours

This course serves as an introduction to the field of management. Content includes: organizational structure, policies and objectives, leadership techniques, management teamwork, communications, delegation of authority, methods improvement, job design, rules and disciplinary policies, motivation and morale, employee recruitment and selection procedures, training and orientation, and employee evaluation.

23.084     Small Business Management     4 hours

(winter)     This course attempts to isolate and provide solutions to problems encountered by individuals who desire to own and/or manage a small business enterprise. Content includes: area of opportunity and the outlook for small business operations, self analysis of the potential small business manager, success and failure patterns, capital needs and capital sources, organizing, directing, and controlling the small business, financial management, locations, facilities, personnel relations, advertising, pricing, consumer credit and inventory control.

23.142\*     Introduction to Business     4 hours

This course covers the function, objectives, organization, and role of business in a free-enterprise system. The course is designed to provide an overview of the field of business for the student

as a consumer and/or to provide a framework into which specialized fields of study may be viewed in perspective to the total field of business.

51.088     The Child in the Family and Culture     4 hours

(fall)             This course focuses on the effect of society on the young child and problems one might encounter while working with children, with emphasis on causes, characteristics, and possible solutions to problems.

\* College Transfer

#### Community Ed. Courses

- Do not apply toward degrees.

11.802 Basic Photography

11.806 Intro to film and film making

## Library Resources

## Photography

Total Picture Control TR 147 .F42  
Photography in Focus TR 146 .J3  
The Camera TR 250 .T55  
Color TR 510 .T55  
Frontiers of Photography TR 147 .T45  
Photographing Nature TR 721 .T52  
Travel Photography TR 790 .T55  
Man and Camera TR 690 .4 .K46  
Special Problems TR 624 .T55  
Portrait of a Decade TR 820.5 .H87  
Light & Film TR 590 .T55  
Polaroid Land Photography TR 263 .P6 A3  
Successful Photography TR 146 .F43  
The Instant It Happened TR 820 .A78  
Getting Started in Photojournalism TR 820 .P3  
Photojournalism TR 820 .T55  
The Student Journalist & Creative Photography TR 820 .W39  
Night Photography Simplified TR 610 .A45  
Photographing Children TR 681 .C5 T55  
The Studio TR 550 .T55  
The Print TR 320 .T55  
Darkroom Techniques TR 287 .F44

Manual of Darkroom Procedures & Techniques TR 287 .J65  
How to Create Photographic Special Effects TR .48 .H63  
The Darkroom Handbook TR 560 .C87  
Underwater Photography TR 800 .S34  
Introduction to Photomechanics TA 418.12 .D8  
Photographing Nature OH 245 .L56  
Photographing Nature TR 721 .T52  
Photographic Chemistry TR 210 .J6  
The Color Photo Book TR 510 .F42  
The Book of Color Photography TR 510 .B23  
Successful Color Photography TR 510 F44  
Busselle. Master photography TR 145 .B98/1978  
Hawkins. Photography: the guide to technique TR 146 .H3  
Stevens. The metaphorical eye TR 148 .S73  
Jacobs. Expressive photography TR 149 .J27  
Grimm. The basic darkroom book. TR 287 .G74  
Nadler. The color printing manual TR 545 .N?  
Hattersley. Beginner's guide to photographing people TR 575 .H28  
Schwarz. How to start a professional photography business  
(Career Center) TR 581 .S35/1976

### Photography Magazines

Afterimage

The Animator

Aperture

Bombay Duck

British Journal of Photography

Camera

Camera 35

Creative Camera

Indusyrrial Photography

Modern Photography

P.S.A. Journal

Peterson's Photographic Magazine

Photograph

Photographer

\*Popular Photography

Professional Photographer

Rangefinder

Studio Photography

\*Available Lake Land College Library

Career Guidance Center

Photography

Photographers - Occupational Brief

Worlds Within Worlds - booklet

An Introduction to Careers in Professional &

Commercial Photography - booklet

Photography in Your Future - booklet

Biographical Photography - leaflet

Careers in News Photography - leaflet



APPENDIX J  
Retail Florist Curriculum Materials

## RETAIL FLOWER SHOP SALESPERSON &amp; DESIGNER

## Task Analysis

- I. Maintains and cares for flowers and plants
- II. Displays and arranges merchandise for sale
- III. Designs and prepares flower arrangements
- IV. Designs decorations to be used with flowers and plants
- V. Performs housekeeping duties
- VI. Performs clerical duties
- VII. Sells and maintains good customer relations
- VIII. Advertises merchandise and services

TRAINING PLANRetail Flower Shop Sales Person and Designer

	School	Job	Independent Study	Evaluation	Comment
<b>I. Maintaining Merchandise</b>					
1. Attach care cards to plants		X			
2. Check in incoming merchandise		X			
3. Condition flowers and plants		X			
4. Fertilize plants	X	X			
5. Make up corsage and cut flower boxes		X			
6. Unpack cut flowers, floral products, and merchandise		X			
7. Water plants - deionized water	X	X			
8. Write needed merchandise on want books		X			
9. Fill water picks		X			
10. Sort seasonal flowers		X			
11. Clean	X	X			
12. Price merchandise		X			
13. Maintain proper temperature control	X	X			
<b>II. Displaying Merchandise</b>					
1. Design and letter show cards		X			
2. Build counter and table-top displays		X			
3. Build displays for sales room cooler		X			
4. Build exterior displays		X			
5. Build interior displays		X			
6. Build window displays		X			
7. Set up manufacturer's display		X			

## Retail Flower Shop Sales Person and Designer

	S	J	I S	E	C
8. Stock shelves, gondolas and counter tops with merchandise		X			
9. Rearrange display room arrangements		X			
III. Designing Flower Arrangements and Decorations					
1. Design artificial flower and foliage arrangements		X			
2. Design casket blankets		X			
3. Design circle arrangements		X			
4. Design crescent arrangements		X			
5. Design corsages		X			
6. Design dish gardens		X			
7. Design dried arrangements		X			
8. Design funeral baskets		X			
9. Design funeral sprays		X			
10. Design funeral vases		X			
11. Design funeral wreaths		X			
12. Design hogarth-shaped arrangements		X			
13. Design inverted "T" shaped arrangements		X			
14. Design novelty arrangements		X			
15. Design oval arrangements		X			
16. Design planters		X			
17. Design right angle shaped arrangements		X			
18. Design spiral shaped arrangements		X			
19. Design symmetrically balanced triangle arrangements		X			
20. Design terrariums		X			
21. Design asymmetrically balanced triangle arrangements		X			

## Retail Flower Shop Sales Person and Designer

	S	J	I	S	E	C
22. Design vertically shaped arrangements		X				
23. Dress potted plants		X				
24. Make bows		X				
25. Set up and dismantle wedding decorations		X				
26. Set up church decorations		X				
27. Spray tint both dried and live floral products		X				
28a. Wire flowers using piercing method		X				
28b. Wire flowers using straight wire method		X				
28c. Wire flowers using hairpin method		X				
28d. Wire flowers using hook-wire method		X				
29. Make silk flowers		X				
30. Cut florette wire for funeral baskets, add filler		X				
31. Make nets or fans		X				
32. Make fruit baskets		X				
33. Service and direct weddings		X				
34. Write on ribbon with glue and glitter		X				
35. Design bud vases		X				
36. "Sand painting" or "sculpture"		X				
37. Make silk flower and foliage arrangements		X				
38. Make material for corsages and weddings		X				
IV. Housekeeping Duties						
1. Clean tools	X	X				
2. Clean work, storage and delivery areas		X				
3. Sharpen knives		X				

## Retail Flower Shop Sales Person and Designer

	S	J	I	S	F	C
4. See that office, work room and refrigeration are clean		X				
5. Clean glass shelves		X				
6. Dust and mop floors		X				
7. Wax floors		X				
8. Wash windows		X				
9. Wash and sterilize flower cases		X				
10. Straighten work room		X				
11. Clean delivery truck		X				
12. Empty trash						
V. Clerical Duties						
1. Write monthly statements	X	X				
2. Write refund forms	X	X				
3. Pay bills		X				
4. Write order reports		X				
5. Keep inventory records	X	X				
6. Call customers who have not paid their bills		X				
7. Inventory daily perishable merchandise	X	X				
8. Complete tax forms		X				
9. Go on buying trips		X				
10. See salesmen		X				
11. Check credit		X				
12. Collect bills and payments		X				
13. Operate computer	X	X				
VI. Selling and Advertising Duties						
1. Call merchandise orders to wholesalers		X				
2. Explain to customers how to care for cut flowers		X				

## Retail Flower Shop Sales Person and Designer

	S	D	H	E	C
3. Explain to customers how to care for potted plants		X			
4. Explain to customers how to design and care for terrariums		X			
5. Explain to customers how to plant a planter		X			
6. Explain to customers how to use floral wire services		X			
7. Explain standards, grades and quality of merchandise to customers		X			
8. Gift wrap packages		X			
9. Interpret warranties and guarantees for customers		X			
10. Route deliveries		X			
11. Wire flowers by telephone		X			
12. Wrap customers' packages		X			
13. Write customers' telephoned orders		X			
14. Write enclosure cards		X			
15. Study about plants to relate to customers	X	X	X		
16. Learn pricing procedures		X			
17. Enclose envelope stuffers		X			
18. Write ads for radio and newspaper	X	X			
19. Show customers new items		X			
20. Read industry literature		X	X		
21. Pack for delivery		X			
22. Repair arrangements and terrariums		X			
23. Answer telephone		X			
24. Plan and price orders		X			
25. Box customers purchases		X			
26. Explain to customer how to care for foliage plants		X			
27. Attempt to help people with "sick" plants or plants with cultural or pathological problems		X			

		Hrs.	Completed Courses		Total Completed
			Transfer Hours	LLC Hours	
<u>Communications Skills:</u>					
Communications I or Composition I (42.050 or 42.120)		4	_____	_____	_____
Public Speaking (94.131)		4	_____	_____	_____
<u>Mathematics/Science:</u>					
Math. (62.122 or above) or Life Science (56.100 or above or Physical Science (84.100 or above)		4	_____	_____	_____
<u>Social Science:</u>					
Human Relations (90.050)		8	_____	_____	_____
Elective (--.040 or above)			_____	_____	_____
<u>Health:</u>					
Health/P.E.		4	_____	_____	_____
					24 h
<u>Co-op:</u>					
Field Experience I	30.050	5	_____	_____	_____
Seminar I	30.051	1	_____	_____	_____
Field Experience II	30.052	5	_____	_____	_____
Seminar II	30.053	1	_____	_____	_____
Field Experience III	30.054	5	_____	_____	_____
Seminar III	30.055	1	_____	_____	_____
Field Experience IV	30.076	5	_____	_____	_____
Seminar IV	30.077	1	_____	_____	_____
Field Experience V	30.078	5	_____	_____	_____
Seminar V	30.079	1	_____	_____	_____
Field Experience VI	30.080	5	_____	_____	_____
Seminar VI	30.081	1	_____	_____	_____
					36 h
<u>Electives (Retail Florist)</u>					
Intro. to Horticulture	15.120	4	_____	_____	_____
Care of House Plants	56.102	1	_____	_____	_____
Organic & Trad. Garden Prac.	56.103	2	_____	_____	_____
Outdoor Flower Gardening	56.104	2	_____	_____	_____
Home Landscaping & Lawn Care	56.105	2	_____	_____	_____
Understanding Art	17.250	4	_____	_____	_____
Design I	17.110	4	_____	_____	_____
Design II	17.111	4	_____	_____	_____
Principles of Salesmanship	23.058	4	_____	_____	_____
Principles of Retailing	23.086	4	_____	_____	_____
Principles of Advertising	23.087	4	_____	_____	_____
Business Math	23.140	4	_____	_____	_____
Principles of Marketing	23.247	4	_____	_____	_____
Management Fundamentals	23.251	4	_____	_____	_____
Small Business Man.	23.084	4	_____	_____	_____
Introduction to Business	23.142	4	_____	_____	_____
Intro to Bus. Data Processing	27.152	4	_____	_____	_____
					36 h
Community Ed. Courses - do not apply towards degree					
11.812 Flower Design for Pleasure					
11.814 Fabric Flowers					
Total					96 h



## 96 hrs. - Associate in Applied Science

RETAIL FLORIST

## 6 qtr. Course Schedule

1st (fall)		2nd (winter)	
Field Exp. I	5	Field Exp. II	5
Seminar I	1	Seminar II	1
*Comm. I/Comp. I	4	*Human Rel.	4
Outdoor Flower Gard.	2	*Health/P.E.	4
Understanding Art	4	Design I	4
	<u>16</u>		<u>18</u>

3rd (spring)		*4th (summer)	
Field Exp. III	5	Field Exp. IV	5
Seminar III	1	Seminar IV	1
Intro. to Hort.	4	Principles of	4
Organic & Trad. Garden	2	Salesmanship	
Prac.		Principles of	4
*Principles of Adver-	4	Retailing	
tising			<u>14</u>
	<u>16</u>		

5th (fall)		6th (winter)	
Field Exp. V	5	Field Exp. VI	5
Seminar V	1	Seminar VI	1
*Sco. Sci. (elec.)	4	*Math/Science	4
*Public Speaking	4	Elective	4
Care of House Plants	1	Elective	3
	<u>15</u>		<u>17</u>

24 hours general ed. \*  
 36 hours co-op field exp. & seminar  
 36 hours related electives

\*You may also begin with this summer qtr. schedule.

## Electives

## Course Descriptions - Retail Florist

15.120*	<u>Introduction to Horticulture</u>	4 hours
(Spring)	An introduction to the principles and practices involved in the development, production, and use of horticulture crops (fruits, vegetables, greenhouse, turf, nursery, floral and landscape).	
56.102*	<u>Care of House Plants</u>	1 hour
(Fall)	How to select, care for, propagate, and identify ailments of house plants. Practical	
(Spring)	work in the greenhouse will include potting, making cuttings and seed sowing.	
56.103*	<u>Organic and Traditional Garden Practices</u>	2 hours
(Spring)	The principles and practices involved in the selection, growth, harvest, and storage of garden crops for food, fun and profit.	
56.104*	<u>Outdoor Flower Gardening</u>	2 hours
(Fall)	How to select, care for, propagate, use and identify annual and perennial flowering	
(Spring)	plants used in outdoor flower beds.	
56.105*	<u>Home Landscaping &amp; Lawn Care</u>	2 hours
(Fall)	This course deals with the principles of landscape design, as well as with the practical	
(Spring)	application of these principles to make one's property more valuable, beautiful, and functional. Emphasis will be placed on the use of trees, shrubs, and turf to create the most attractive and functional setting for one's home.	
17.250*	<u>Understanding Art</u>	4 hours
	This course is designed to develop an appreciation of the visual arts and their relationships to man and his environment.	
17.110*	<u>Design I</u>	4 hours
(Winter)	This course covers the elements and principles of design emphasizing two-dimensional organization of forms based on discussion and studio problems.	

(Credit is not granted to students who  
 \*College Transfer have received credit in 17.140)

17.111*	<u>Design II</u>	4 hours
(Spring, if offered)	This course focuses on continued study of elements and principles of design with emphasis on three-dimensional organization or form with various media.	
23.058	<u>Principles of Salesmanship</u>	4 hours
(Summer)	This course covers various phases of salesmanship such as buying habits of the customer, buying motives, the pre-approach, presentation and demonstration, handling objections, closing the sale, suggestion, and sale follow-up.	
23.086	<u>Principles of Retailing</u>	4 hours
(Summer)	This course is designed for (1) those who own or plan to become owners of a retail store, (2) those who are involved or plan to become involved in the management function of a retail store and/or (3) those who desire a general knowledge of retailing as an institution. Content includes: opportunities and careers in the field of retailing, planning the store location, facilities and layout, sale promotion, customer services, retail financial management and control, and buying, receiving, pricing, and storing as elements of effective merchandise management.	
23.087	<u>Principles of Advertising</u>	4 hours
(Spring)	This course provides a comprehensive survey of the whole field of advertising to show the relationship of advertising to history and economics. The course covers such topics as how to write advertising, how to display advertising, where to publish advertising, sales promotion, creative development of advertising, media selection, and the administrative problems involved in advertising.	
(Summer)		
23.140*	<u>Business Math</u>	4 hours
	This course covers basic applications of mathematics in the business world-percentages, elementary algebra, interest, installment buying, statistics, insurance, and the like. It is designed to reinforce and expand social and business concepts held by the student through the use of mathematics. This course is taught largely on an independent basis.	

23.247\*      Principles of Marketing      4 hours

This course serves as an introduction to the field of marketing. Content includes: the identification, nature and structure of target markets; the controllable variables in the marketing mix which include product lines, channels of distribution, pricing policies, advertising promotion; and the uncontrollable variables which include legal environment, economic environment, resources and objectives of the firm, cultural environment, and the existing business structure.

23.251\*      Management Fundamentals      4 hours

This course serves as an introduction to the field of management. Content includes: organizational structure, policies and objectives, leadership techniques, management teamwork, communications, delegation of authority, methods improvement, job design, rules and disciplinary policies, motivation and morale, employee recruitment and selection procedures, training and orientation, and employee evaluation.

23.084      Small Business Management      4 hours

(Winter)      This course attempts to isolate and provide solutions to problems encountered by individuals who desire to own and/or manage a small business enterprise. Content includes: area of opportunity and the outlook for small business operations, self analysis of the potential small business manager, success and failure patterns, capital needs and capital sources, organizing, directing, and controlling the small business, financial management, locations, facilities, personnel relations, advertising, pricing, consumer credit, and inventory control.

23.142\*      Introduction to Business      4 hours

This course covers the function, objectives, organization, and role of business in a free-enterprise system. The course is

23.142\* (Continued)

designed to provide an over-view of the field of business for the student as a consumer and/or to provide a framework into which specialized fields of study may be viewed in perspective to the total field of business.

27.152\*

Introduction to Business Data Processing

4 hours

This generalized course emphasizes business data processing. It covers the areas of unit record equipment, history of data processing, computer hardware, careers in data processing and programming. The students will have "hands on" experience with the equipment and will actually prepare and run a computer program.

\*College Transfer

FLORICULTURE - MAGAZINES  
RETAIL FLORIST

Teleflorist

American Horticulturist

American Rose Magazine

Flower & Garden

Horticulture

Plants Alive

Plants and Gardens

Popular Gardening Indoors

Today's Woman House Plants

\*House & Garden

House Beautiful

\*Available in Lake Land College Library

APPENDIX K  
Therapeutic Recreation Aide Curriculum Materials

TASK ANALYSIS  
THERAPEUTIC RECREATION AIDE  
(ACTIVITY DIRECTOR)

- I. Identifies Activities in General
- II. Establishes the Recreation Program
- III. Organizes and Runs the Program
- IV. Instructs the Participants
- V. Utilizes Resources



TRAINING PLAN  
THERAPEUTIC RECREATION AIDE  
(Activity Director)

	School	Job	Independent Study	Evaluation	Comment
<b>I. Identifying Activities in General</b>					
1. Identify social type activities (dancing, singing, games outings to places of interest)	X	X			
2. Identify diversional type activities (sewing, painting, crafts)	X	X			
3. Identify work type activities (housekeeping chores, repair shop)	X	X			
4. Identify volunteer service type activities (wrapping bandages, community fund)	X	X			
5. Identify intellectual type activities (book reviews, drama, music appreciation)	X	X			
6. Identify spiritual and religious type activities	X	X			
7. Identify group activities (spectator sports, publications, performances)	X	X			
8. Identify individual activities (make maximum use of each persons physical and mental capabilities)	X	X			
<b>II. Establishing the Recreation Program</b>					
1. List activities that are available		X			
2. Interview each person to solicit preferences		X			
3. Check admission forms and records (with consent of administration)		X			
4. Ask other staff members and volunteer workers		X			
5. Investigate equipment and materials already available		X			
6. List nonexpendable items needed (tables, chairs, phonograph)		X			
7. List expendable items needed (paper, paint, etc.)		X			
8. Contact local businesses for donations and discounts		X			

THERAPEUTIC RECREATION AIDE  
(Activity Director)

	S	J	S	E	C
9. Determine if all costs will be borne by the facility or some by participants		X			
10. Determine procedure for the sale of crafts		X			
11. Identify all policies regarding accident and fire prevention, emergency procedures and precautions		X			
12. Designate spectator group activities area		X			
13. Determine set-up and clean-up time for activities		X			
14. Designate personal activities area (near bedrooms)		X			
15. Designate quiet, private area		X			
16. Designate noisy recreation area (away from bedrooms)		X			
17. Designate space for storage of supplies		X			
18. Designate work-type activities area		X			
19. Determine lighting required for each area		X			
20. Determine climate control provisions		X			
21. Determine electrical outlet provisions		X			
22. Arrange work areas with aisles big enough for wheel chairs		X			
23. Determine placement of telephones		X			
24. Designate outdoor recreation area		X			
25. Determine equipment necessary and storage area		X			
26. Designate office area and equipment needed		X			
III. Organizing and Running the Program					
1. Inform the administrator of planned activities		X			
2. Consult the participant's physician in activities which require active participation		X			

THERAPEUTIC RECREATION AIDE  
(Activity Director)

	S	T	S	E	C
3. Consult the social worker when dealing with emotional problems		X			
4. Check with the charge nurse prior to scheduling activities		X			
5. Consult with the Occupational Therapist Registered		X			
6. Consult with the Physical Therapist		X			
7. Determine volunteer's rights and responsibilities (written)		X			
8. Recruit volunteers through telephone, newspaper, and radio		X			
9. Interview and screen each volunteer		X			
10. Determine hours the volunteer will be able to work		X			
11. Orient the volunteer to the facility and the activities program		X			
12. Assign specific responsibilities to volunteers		X			
13. Train volunteers in selected activities		X			
14. Set up goals and objectives		X			
15. Maintain effective communication with volunteers		X			
16. Recognize volunteers contributions		X			
17. Develop activities schedule using physical and emotional considerations		X			
18. Establish calendar for activities		X			
19. Consult housekeeping schedules, kitchen schedules, etc.		X			
20. Indicate regularly scheduled activities		X			
21. Indicate regular seasonal activities		X			
22. Select activities according to interests of participants and help available		X			
23. Select personal and "filler" activities		X			
24. Review the plan with administrator, dept. heads, etc.		X			

THERAPEUTIC RECREATION AIDE  
(Activity Director)

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	S	J	I	S	E	C
25. Make copies of the plan and distribute them		X				
26. Assign responsibilities for specific activities		X				
27. Determine time allowances		X				
28. Review the day's activities before starting		X				
29. Request feedback from participants and volunteers		X				
30. Keep records on individuals daily participation in activities		X				
31. Review monthly calendar of activities		X				
32. Read professional literature and visit other facilities		X	X			
IV. Instructing Participants in Selected Activities						
1. Prepare well for the activity beforehand		X				
2. Assemble any equipment and materials needed		X				
3. Explain the purpose or general idea of the activity		X				
4. Demonstrate the activity		X				
5. Give step-by-step instructions		X				
6. Involve participants one step at a time		X				
7. Reinstruct if necessary		X				
8. Ask for questions		X				
V. Utilizing Resources						
1. Collect items normally discarded (bottles, cans, boxes, etc.)		X				
2. Solicit items from friends and family of participants		X				
3. Solicit surplus goods from community businesses		X				
4. Solicit donations of special equipment and prizes		X				
5. Compile list of churches and their activities		X				
6. Compile list of clubs and organizations		X				
7. Compile list of municipal activities (museums, concerts, etc.)		X				

THERAPEUTIC RECREATION AIDE  
(Activity Director)

TRAINING PLAN

	School	Job	Independent Study	Evaluation	Comment
8. Keep current list of local exhibitions		X			
9. Obtain names of film distributors		X			
10. Consult local library for films		X			
11. Consult local industry for films		X			
12. Compile a bibliography of films		X			
13. Compile a bibliography of suppliers of equipment		X			

	Hrs.	Completed Courses		Total Completed
		Transfer Hours	LLC Hours	
<u>Communications Skills:</u>				
Communications I or Composition I (42.050 or 42.120)	4	_____	_____	_____
Public Speaking (94.131)	4	_____	_____	_____
<u>Chematics/Science:</u>				
Math. (62.122 or above) or Life Science (56.100 or above or Physical Science (84.100 or above)	4	_____	_____	_____
<u>Social Science:</u>				
Human Relations (90.050)	8	_____	_____	_____
Elective (---.040 or above)				
<u>Health:</u>				
Health/P.E.	4	_____	_____	_____
				<u>24 h</u>
<u>Co-op:</u>				
Field Experience I 30.050	5	_____	_____	_____
Seminar I 30.051	1	_____	_____	_____
Field Experience II 30.052	5	_____	_____	_____
Seminar II 30.053	1	_____	_____	_____
Field Experience III 30.054	5	_____	_____	_____
Seminar III 30.055	1	_____	_____	_____
Field Experience IV 30.076	5	_____	_____	_____
Seminar IV 30.077	1	_____	_____	_____
Field Experience V 30.078	5	_____	_____	_____
Seminar V 30.079	1	_____	_____	_____
Field Experience VI 30.080	5	_____	_____	_____
Seminar VI 30.081	1	_____	_____	_____
				<u>36 h</u>
<u>Electives (Activity Director)</u>				
Leadership in Recreation 76.180	4			
Introduction to Com. Recreation 76.181	4			
Introduction to Physical Ed. 76.183	4			
Recreation for Special Groups 76.290	4			
Intro. to Health Care Admin. 70.076	4			
Legal Aspects of Health Care & Drug Laws 70.077	4			
Body Structure and Function 71.050	4			
Psychology of Old Age 90.099	4			
Death & Dying 90.235	4			
Nutrition 48.102	4			
Community Health 48.270	4			
Introduction to Business 23.142	4			
Introduction to Art or Design I 17.140	4			
Diseases of Man (New class) 48.290	4			
Technique Activity Classes 76.2--	2			
				<u>36 h</u>

Total: 96 hNot offered on a regular basis

## 96 hrs. - Associate in Applied Science

THERAPEUTIC RECREATION AIDE  
(ACTIVITY DIRECTOR)

## 6 qtr. Course Schedule

1st qtr. (fall)		2nd qtr. (winter)	
Co-op Field Exp. I	5	Co-op Field Exp. II	5
Co-op Seminar I	1	Co-op Seminar II	1
*Comm. I/Comp. I	4	*Human Relations	4
*First Aid & Safety II	4	Leadership in Recrea-	4
-Intro to Physical Ed.	<u>4</u>	tion	<u>4</u>
	18		14
3rd qtr. (spring)		4th qtr. (fall)	
Co-op Field Exp. III	5	Co-op Field Exp. IV	5
Co-op Seminar III	1	Co-op Seminar IV	1
*Math/Science	4	-Body Structure &	4
-Intro. to Comm. Recreation	4	Function	
-Nutrition	<u>4</u>	-Community Health	<u>4</u>
	18		14
5th qtr. (winter)		6th qtr. (spring)	
Co-op Field Exp. V	5	Co-op Field Exp. VI	5
Co-op Seminar V	1	Co-op Seminar VI	1
*Social Science elec.	4	-Intro to Art	4
*Public Speaking	4	-Elective	<u>4</u>
-Diseases of Man	<u>4</u>		14
	18		

\*24 hours general ed requirements

## College Transfer

## THERAPEUTIC RECREATION AIDE (ACTIVITY DIRECTOR)

- |                         |  |         |
|-------------------------|--|---------|
| 76.180                  | <u>*Leadership in Recreation</u>   | 4 hours |
| (winter)                | This course focuses on the basic philosophy of recreation, of leadership, and of areas, activities and interests in the field of recreation and is open to both men and women.   |         |
| 76.181                  | <u>*Introduction to Community Recreation</u>   | 4 hours |
| (spring)                |  |         |
| 76.183                  | <u>*Introduction to Physical Ed.</u>   | 4 hours |
| (fall)                  | This course focuses on the general scope, purpose, history, growth, and development of physical education.   |         |
| 76.290                  | <u>*Recreation for Special Groups</u>  | 4 hours |
| (on demand)<br>(summer) | This course provides an introduction to concepts and principles of therapeutic recreation; types of illnesses and disabilities, settings; programming and services; and the role of the therapeutic recreator.   |         |
| 70.076                  | <u>Introduction to Health Care Administration</u>  | 4 hours |
| (on demand only)        | This course provides an introduction to the administrative practices of community health care facilities including both long-term health care facilities and facilities administering to ambulatory patients. Public and private agencies are studied in reference to their roles in community health systems with special emphasis placed upon the role of nursing home facilities. Auxiliary agencies and programs are reviewed such as insurance, administration, public aid, medicare, and medicaid. |         |



70.077      Legal Aspects of Health Care and Drug Laws      4 hours

(on              This course explores state and national  
demand      status which affect health care facilities  
only)      and their auxiliary governing boards, reg-  
                 ulations, and guidelines. Health and safety  
                 codes and regulations are studied as well as  
                 pertinent topics from general commercial and  
                 business law such as contracts, torts, and  
                 legal procedures.

71.050      Body Structure and Function      4 hours

(fall              This course focuses on basic concepts  
only)      in the normal anatomy and physiology of the  
                 body for students in practical nursing and  
                 other health related occupations.

90.099      Psychology of Old Age      4 hours

(demand              This course focuses on old age as an  
only)      important stage in the psychological develop-  
                 ment of the individual. Emphasis is placed  
                 on the motivating forces, needs, drives, and  
                 levels of functioning of the older person.  
                 The developmental tasks associated with  
                 changes in sensory experience and perception,  
                 motivation, learning, memory, thinking and  
                 intelligence, personality, and adjustment  
                 will be covered. The relationship of those  
                 developmental tasks and changes to the  
                 psychopathology of old age will be included.

90.235      \*Death and Dying      4 hours

(not              A study of death and dying as it is ex-  
regular)      perience in modern American society. The course  
                 will cover the meanings of death and dying, the  
                 dying individual, the effects of death on others,  
                 and the moral issues surrounding death.

48.102      \*Nutrition

                 This course focuses on understanding of the  
                 importance of good nutrition, the basic uses of  
                 food by the body, the basic four food groups,  
                 diet, food nutrients, and nutrition through the  
                 life cycle.

23.142      \*Introduction to Business      4 hours

This course covers the functions, objectives, organization, and role of business in a free-enterprise system. The course is designed to provide an over view of the field of business for the student as a consumer and/or to provide a framework into which specialized fields of study may be viewed in perspective to the total field of business.

48.270      \*Community Health      4 hours

(fall)      This course focuses on factors in the physical, biological, and social environments that influence the magnitude and character of community health problems, goals, and solutions.

17.140      Introduction to Art      4 hours

This course focuses on studio problems providing creative experiences in two and three-dimensional media to fulfill the needs of the elementary and junior high school teacher.

Credit is not granted to students who have received credit in 17.110.

48.290      Diseases of Man (new health class)      4 hours

(winter)

76.2--      Technique Activity Classes      2 hours

These courses require a prerequisite of the beginning service course in the skill or evidence of a level of competence in the specific skill necessary for teaching. Prior arrangements should be made with the instructor before registering for the course.

Library Resources

Therapeutic Rec. Aids

Introduction to Community Recreation GV 171 .B85  
 Recreation - A Medical Viewpoint RM 737 .H33  
 Recreations and Special Populations GV 171 .S78  
 Recreation for Retarded Teenagers and Young Adults GV 183.7 .C3  
 Recreation for the Handicapped GV 183.5 .H8  
 Therapeutic Recreation Service RC 489 .R4 .A9  
 Clinical Applications of Recreational Therapy RC 489 .R4 03  
 Basic Terminology for Therapeutic Recreation R 123 .G8

Career Guidance Center

Therapeutic Recreation Aide

The Therapeutic Recreation Specialist - leaflet

Therapeutic Recreation Journal - Magazines

Therapeutic Recreation Journal

\*Parks and Recreation

Nursing Homes

Geriatrics

Medicine and Science in Sports

\*Journal of Physical Education and Recreation

\*American Alliance for Health, Physical Education and Recreation

\*Available in Lake Land College Library